Holden Commodore and Calais

OWNER HANDBOOK
VK SERIES

Owner's Name ....

Address ....

Town ....

State ....Postcode ....

Vehicle Identification Certificate

Model Name ....

Reg. No. ....Eng. No. ....

Vehicle Identification No. (V.I.N.) ....

Date of Purchase ....Odometer Reading ....

Selling
Dealer's
Stamp &
Signature ....

Pre Delivery Checklist .... Page 131

Delivery Certificate .... Page 132

CHANGE OF ADDRESS/OWNERSHIP

GMH requests that owners who change their address (or name) or subsequent owners who purchase this vehicle, complete and return by mail one of the forms on pages 161 or 163.

This notification is important even after the expiration of the original vehicle warranty in order that GMH will be able to contact you should the need arise.

Part No. 92018903
July 1985 (PRINT 5)

GENERAL MOTORS-HOLDEN'S SALES PTY. LIMITED

(Incorporated in Victoria)

New Vehicle Warranty

GENERAL MOTORS-HOLDEN'S SALES PTY. LTD. HEREBY WARRANTS THAT IT WILL MAKE GOOD, WITHOUT CHARGE, ANY DEFECT WHICH APPEARS IN THE VEHICLE IDENTIFIED IN THE VEHICLE IDENTIFICATION CERTIFICATE FOUND ON THE INSIDE OF THE FRONT COVER.

Provided

1. the defect has been notified to an authorised GMH Dealer or Service Dealer:
    (a) before the vehicle has travelled a distance of 20,000 km, or:
    (b) within 12 months of the date of delivery of the vehicle to the first retail purchaser (or in the case of a Demonstrator vehicle within 12 months of the date when it was first placed into service by the Dealer) whichever comes first, and
2. the vehicle has been returned to an authorised GMH Dealer or Service Dealer

And

3. the Dealer has determined that the defect complained of *is* one of material or workmanship and *is not* caused by:
    (a) misuse or abuse of the vehicle such as by racing, rallying, overloading, etc. or by neglect
    (b) operation of the vehicle after it is known to be defective
    (c) accident or deliberate act
    (d) atmospheric fallout or flood, hail, salt, etc.
    (e) failure to carry out proper maintenance service
    (f) use of incorrect types and grades of fuel, oil or lubricants
    (g) alteration or modification of the vehicle
    (h) the fitting of parts or accessories not marketed by GMH
    (i) any work carried out on the vehicle by someone other than an authorised GMH Dealer or Service Dealer,

BY THE DEALER (or as otherwise decided by GMH Sales) MAKING GOOD THE DEFECT BY REPAIR OR, AT THE OPTION OF GMH SALES, BY REPLACEMENT.

Excluded from this Warranty are

- defects in tyres (these being warranted by their manufacturers), and services such as engine tuning, brake adjustment, replacement of air and oil filters, wiper rubbers, etc. which are required as part of normal vehicle maintenance.

This Warranty applies only to vehicles operated in Australia and is given to the person who is entitled to possession of the vehicle whether as owner, lessee or otherwise and is given in addition to all rights conferred by law on that person.

Owners of vehicles operated outside Australia should consult their local dealer regarding the warranty applicable to their vehicles.

GMH Parts and Accessories Warranty

General Motors-Holden's Limited warrants in respect of GMH parts and accessories required as replacement parts, that it will make good by repair or at its option by replacement any defect occurring in any such GMH parts and accessories within 12 months from the date of acquisition or in the case of a GMH part or accessory which has been installed in a vehicle by a GMH Dealer or Service Dealer before such vehicle has travelled a distance of 20,000 kms from the date of installation, whichever first occurs.

Maintenance items such as filters, spark plugs, wiper blades and brake pads/linings will require replacement as part of normal vehicle maintenance. Such replacements are not the subject of this warranty.

Notice to Customers

- No GMH dealer or other person is authorised or permitted to give or make any statement, assertion or undertaking in relation to the quality, performance, characteristics, descriptions or fitness for any purpose of any GMH product or in connection with the supply of any GMH product, which is at variance with any written statement, assertion or undertaking on any of these subjects given or made by General Motors-Holden's Limited or General Motors-Holden's Sales Pty. Ltd. in its published sales literature, and neither company accepts any liability for any such unauthorised action.
- General Motors-Holden's Limited and General Motors-Holden's Sales Pty. Ltd. have franchised dealers in many parts of Australia for the sale of service parts and the provision of service to owners of GMH's products. Every endeavour is made to ensure that such dealers carry adequate stocks of service parts, and are equipped to provide satisfactory service, but neither General Motors-Holden's Ltd. nor General Motors-Holden's Sales Pty. Ltd. makes any promise that such parts or service facilities will be available, or available at any specific location or any particular time.

HOLDEN — VK SERIES COMMODORE & CALAIS OWNER HANDBOOK

This handbook should be considered a permanent part of this car. It should stay with the car when sold to provide the next owner with important operating, safety and maintenance information.

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This handbook applies to all VK Series models and therefore may contain explanations of some equipment not installed in your vehicle.

ALL INFORMATION, ILLUSTRATIONS & SPECIFICATIONS IN THIS HANDBOOK ARE BASED ON THE LATEST PRODUCT INFORMATION AVAILABLE AT THE TIME OF PRINTING. GENERAL MOTOR'S HOLDENS LIMITED RESERVES THE RIGHT TO MAKE CHANGES AT ANY TIME WITHOUT NOTICE AND WITHOUT INCURRING ANY OBLIGATION.

INTRODUCTION

We thank you for choosing Holden and want to assure you of our continuing interest in your motoring pleasure and satisfaction.

This handbook has been prepared to acquaint you with the operation and maintenance of your new vehicle and to provide important safety and warranty information.

When it comes to service, remember that your GMH Dealer has the trained personnel and specialised equipment to correctly service your vehicle. Your dealer invites you to return for all of your service needs both during and after the warranty period.

To help dealers handle your needs, GMH has a number of Zone Offices throughout the country. If you have a problem that has not been handled to your satisfaction follow the steps in Section 4 of this handbook.

For the proper maintenance and performance of the vehicle, use only genuine General Motors parts which are identified by one of the trademarks shown above.

THE USE OF PARTS, ADDITIVES AND/OR TREATMENTS OTHER THAN THOSE MARKETED BY GENERAL MOTORS MAY BE DETRIMENTAL TO YOUR VEHICLE'S PERFORMANCE AND SAFETY AND MAY VOID YOUR NEW VEHICLE WARRANTY.

SECTION 1A

WARRANTY — QUESTIONS & ANSWERS

This section is designed to assist you in understanding the terms of the GMH Warranty provided with your new vehicle.

The following are some of the most frequently asked questions for which detailed answers have been provided.

1. **Q. How do I go about obtaining GMH Warranty Service?**

   A. It is the responsibility of the Selling Dealer to provide GMH Warranty Service therefore you should take your vehicle to that Dealer whenever GMH Warranty Service is required. However, if it is not possible for you to take your vehicle to the Selling Dealer (for example — if you are on a long trip, have shifted to another location or have other difficulties) you may take your vehicle to any other Authorised GMH Dealer. The Owner and Vehicle Identification details recorded on the inside front cover of this handbook are required by the Servicing Dealer in connection with the provision of GMH Warranty Service. Therefore, you should present this Handbook to the Servicing Dealer whenever you request GMH Warranty Service.

   NOTE: 1500 kilometre Warranty Service may be carried out by another GMH Dealer provided you have a letter of Introduction from the Selling Dealer. This letter must be arranged prior to obtaining the 1500 kilometre service.

2. **Q. What should I do if in an emergency GMH Warranty Service is required and an Authorised GMH Dealer is not available to provide such service at that time?**

   A. If in an emergency a repair, replacement or adjustment of a kind covered by the GMH New Vehicle Warranty is required to enable your vehicle to be operated safely and it is not practicable for you to have that service performed by the Selling Dealer or another Authorised GMH Dealer, the service, but only to the extent that it is necessary to enable your vehicle to be operated safely may be performed by any other qualified service technician or repairer. A claim for the reasonable cost of such service may be made on GMH through the Selling Dealer or the Authorised GMH Dealer who would normally provide you with GMH Warranty Service. When such emergency service has been performed by other than the Selling Dealer or an Authorised GMH Dealer you should take your vehicle to the Selling Dealer or an Authorised GMH Dealer for inspection of the service and/or the completion of any required GMH Warranty Service as soon as possible.

3. **Q. What should I do if my vehicle becomes unsafe or inoperative as a result of a defect which is covered by the GMH New Vehicle Warranty?**

   A. If, as a result of a defect which is covered by the GMH New Vehicle Warranty your vehicle cannot be driven or is unsafe to drive you should contact the nearest Authorised GMH Dealer as soon as possible and arrange for that Dealer to carry out the required GMH Warranty Service.

4. **Q. Will I have to pay for any costs or expenses in connection with the provision of GMH Warranty Service?**

A. All parts and labour used and supplied in carrying out GMH Warranty Service at the premises of the Servicing Dealer are free of charge. Whenever GMH Warranty Service is to be carried out by the Servicing Dealer it is your responsibility to deliver your vehicle to the Servicing Dealer's premises and to collect it from those premises when the Warranty Service has been completed.

If as a result of a defect which is covered by the GMH New Vehicle Warranty your vehicle cannot be driven or cannot be driven safely and you arrange for the nearest Authorised GMH Dealer to carry out the required GMH Warranty Service, such reasonable costs and expenses as are incurred in moving your vehicle to that Authorised GMH Dealer's premises or, if that Dealer so elects, in performing the required GMH Warranty Service at the place where your vehicle is located (or at some other location) will be covered by the GMH New Vehicle Warranty.

5. **Q. Are damage or injury, loss of time, inconvenience, commercial or other direct or indirect loss covered by the GMH New Vehicle Warranty?**

A. No, these items are not covered. The GMH New Vehicle Warranty covers only the repair, replacement or adjustment at the Servicing Dealer's premises of those parts of your vehicle which are found by GMH to be defective in materials or workmanship during the GMH Warranty Period. No other types of claim for compensation of whatever nature, notwithstanding that the same may have resulted from or have arisen as a consequence of a defect in materials or workmanship in your vehicle or in any part of your vehicle, will be recognized under the GMH Warranty. The rights and remedies which are available to you under any relevant Statutory Enactment or otherwise at law in connection with any such claim for compensation must be pursued outside the ambit of the GMH Vehicle Warranty.

6. **Q. Will I have to pay for Maintenance costs during the Warranty Period?**

A. Maintenance costs, since they do not arise from defects in materials or workmanship, are not covered by the GMH Vehicle Warranty. However, the scheduled 1500 kilometre service specified in Section 6B of this handbook is free of charge (except for any lubricants used) provided that your vehicle has been operated under Normal Conditions (refer "Vehicle Operating Conditions" Section 6B of this handbook) and provided also that no modifications (other than a modification made by or at the direction of GMH) has been made to your vehicle which adversely affects the Performance and/or Compliance of your vehicle. The Maintenance Schedules in this handbook specify the minimum maintenance requirements for your Vehicle operating under Normal Conditions. If you operate under Extreme Conditions (refer "Vehicle Operating Conditions", section 6B) your vehicle may require more frequent maintenance services. See your Servicing Dealer for advice on these matters.

The Maintenance items, except where they are required as a result of defects in materials or workmanship, for which you will be required to pay include:—

- Engine tune-up — includes replacing spark plugs.
- Replacement of all filters.
- Cleaning or flushing of fuel, cooling, brake, engine, transmission, differential or power steering systems — after 1,500 kilometres.
- Adding to or replacing lubricants.
- Adding to or replacing air conditioning refrigerant — after 5,000 kilometres.
- Any necessary adjustments to drive belts, transmission, clutch, parking brake, etc.

- Replacing wiper blade rubber elements.
- Wheel balancing — after 5,000 kilometres.
- Wheel alignment.
- De-dusting or de-glazing of brake linings or pads — after 1,500 kilometres.
- Brake lining wear or damage.
- Brake disc pad or disc wear.
- Battery re-charging.
- Paint, bright metal finish and trim, due to normal deterioration.
- Body panel, adjustment — after 1,500 kilometres.
- Door, engine hood or rear compartment lid lock adjustments.
- Glass or channel adjustments — after 1,500 kilometres.
- Body rattles, squeaks and general tightening of bolts, fastening and fittings — after 1,500 kilometres.
- Chipped glass or breakage.
- Torn or damaged floor mats or carpets.

7. **Q. Are my tyres covered by the GMH Vehicle Warranty?**

A. No. The tyres fitted to your vehicle are covered by a separate warranty provided by the tyre manufacturer.

This warranty arrangement does not deprive you of any of those rights and remedies which are conferred upon you by Statutory Enactment.

Either the Selling Dealer or the Servicing Dealer will assist you by discussing any queries which you may have with respect to the tyre manufacturer's warranty, with the tyre manufacturer's representatives.

8. **Q. Are GMH Parts and Accessories covered by warranties?**

A. If you purchase a GMH Part or Accessory from an Authorised GMH Dealer it will be warranted by that Dealer under the GMH Parts and Accessories Warranty against defects in materials or workmanship for a period of 12 months from the date on which you purchased it. In the case of a GMH Part or Accessory which has been installed in a vehicle by a GMH Dealer or Service Dealer it will be warranted for a period of 12 months or a distance of 20,000 kms from the date of installation, whichever occurs first.

Maintenance items such as filters, spark plugs, wiper blades and brake pads/linings will require replacement as part of normal vehicle maintenance. Such replacements are not the subject of this warranty.

9. **Q. What should I do if I have any problems in obtaining GMH Warranty Service?**

A. If you encounter any problems in obtaining GMH Warranty Service you should firstly discuss your problems with the Service Manager of the Servicing Dealer. If you cannot resolve your problem with the Service Manager then try and resolve it with the Dealer himself. If you still have a problem at this stage then you should contact the GMH Owner Relations Manager in your State. The addresses of these Owner Relations Managers are listed in Section 4 of this handbook.

SECTION 1B

SAFER MOTORING — PRECAUTIONS

This handbook contains many CAUTION notices which are there to help safeguard yourself and your vehicle.

Please read these notices carefully and follow all instructions given.

Several safety items, including some which appear later in this handbook, are presented here as a safety summary. For a more detailed explanation of some items, refer to the appropriate section of this handbook.

ENGINE EXHAUST GAS

Avoid inhaling exhaust gases because they contain carbon monoxide, which is a dangerous gas that can cause unconsciousness and is potentially lethal.

DO NOT RUN THE ENGINE IN AN ENCLOSED AREA SUCH AS THE GARAGE ANY LONGER THAN IS NEEDED TO MOVE THE VEHICLE.

DO NOT SIT IN A PARKED VEHICLE FOR ANY EXTENDED PERIOD OF TIME WITH THE ENGINE RUNNING.

If at any time you think exhaust fumes are entering the car, have the cause determined and corrected as soon as possible.

SEAT BELTS

Various road laws require the wearing of seat belts. It is important that the habit of using these should be developed by yourself and others in the vehicle. In the interest of safety, seat belts should be checked regularly. Your Dealer will inspect and check the belts for you as part of the normal Maintenance Service. Never attempt to modify or change the seat belt away from the original specification as this will affect the operation of the belts and reduce their effectiveness in preventing injury in an accident.

ANTI-THEFT IGNITION STEERING LOCK

DO NOT turn the ignition switch away from the ON position while the vehicle is in motion as this renders ineffective any power assisted equipment fitted to your vehicle.

Never remove the key while the vehicle is in motion as this will lock the steering of the vehicle and render it inoperative.

BRAKES

Driving through water may affect performance. Applying the brakes lightly will indicate whether they have been affected. To dry them quickly, lightly apply the brakes while maintaining a slow forward speed with an assured clear distance ahead until brake performance returns to normal.

Brake pedal travel should not be obstructed by ill-fitting floor mats or any other material under the pedal which causes interference with normal pedal movement.

Also your seat should be positioned so that you can reach the brake pedal satisfactorily under all braking conditions.

Power Assisted Brakes

Power assisted brakes which are fitted to your vehicle utilise vacuum from the engine when it is running. Never let the vehicle run down steep grades without the engine running. **Never** coast with the engine switched off.

COOLING SYSTEM

DO NOT REMOVE THE RADIATOR CAP IF THE ENGINE AND RADIATOR ARE HOT.

After the engine has cooled sufficiently the cap should be rotated slowly to the first stop, which permits the pressure to release slowly through the overflow pipe. Before doing this, cover the cap with an old rag or cloth to avoid possible scalding.

HIGH ENERGY IGNITION SYSTEM

Engines fitted with High Energy Ignition Systems can produce high tension voltages in the primary and secondary circuits which are dangerous. Any work carried out must be done with utmost care. Before removing or refitting any parts or electrical connections, ensure that the ignition system is switched off and the battery disconnected.

Care should be taken when servicing, to avoid contact with conductive parts to avoid severe electrical shock.

PETROL FUMES

Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If petrol fumes are noticed while driving, the cause should be determined and corrected without delay.

PARKING

When leaving your vehicle unattended:

1. Apply the parking brake.
2. Shift transmission selector as follows:
   Manual Transmission — If car is facing downhill, place in Reverse gear.
   — If car is facing uphill, place in First gear.
   Automatic Transmission — Place in 'Park'.
3. Turn ignition key to Lock and remove key.
4. Shut all windows and lock all doors.

TYRE TRACTION

A decrease in driving, cornering and braking traction occurs when water, snow, ice, gravel or other material is on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions.

LOOSE ARTICLES

Do not leave loose articles or luggage in the passenger compartment. Whenever possible, stow articles in the luggage compartment. For wagons, loads stowed in the luggage area should be firmly secured.

VEHICLE BATTERY

Batteries emit an explosive gas mixture which may be ignited by sparks or naked flames. You should therefore keep sparks and flames away from the battery at all times and never smoke near a battery.

Batteries contain sulphuric acid. If acid contacts skin or clothing, flush immediately with lots of water. In case of eye contact, flush with lots of water and contact a doctor immediately.

Take care with all metal objects and tools including items you may wear (e.g. jewellery, rings and metal watchbands) near battery terminals. Metal objects that touch battery terminals can cause sparks and serious heat burns to the user or wearer.

GENERAL EXTERIOR/ INTERIOR ITEMS

KEYS AND LOCKS

Your Commodore is fitted with a two key locking system which provides security for personal valuables when parking in car parks or similar areas where locking of the vehicle is not permitted.

Master Key

Master key (plastic head) is retained by the driver and operates all locks on the vehicle.

The key code number is stamped on the Plastic Key Head. Before placing the key on your key ring, record the code number and place it in a safe place so that if the key is lost, duplicates can be ordered from any GM-H Dealer by quoting the key code number.

MASTER KEY
SERVICE KEY

Service Key

Service key (square head) is left with the vehicle when it is parked in those areas described above and only operates the door locks and ignition switch. This enables the vehicle to be moved if required but does not allow entry to the glove or luggage compartments.

Door Lock Operation

From Outside:

- Both front doors can be locked or unlocked with either key. To open doors, unlock with key then lift door handle.
- To lock doors without using key, move the slider lock control to the '**lock**' position then close the door.

  NOTE: The slider control is in the '**lock**' position when the red section of the slider is no longer visible.

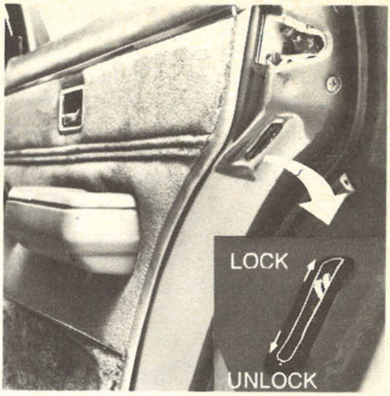
From Inside:

- To lock doors, move the slider to the 'lock' position.
- To open doors, move the slider to the unlocked position (red) before pulling the door handle.

Rear 'Child Proof' Door Locks

This added safety feature is built into both rear door locks. To operate it raise the lever as far as it will go and close the doors. The door cannot be opened from inside, regardless of the locking position. To unlock, open the door from outside and slide the lever back down.

CAUTION: For safety, you should check that the lock is operating correctly, after setting, by attempting to open the door from the inside of the vehicle.



Electric Door Lock (Where Fitted)

The Electric Lock System incorporates a motor driven actuator in all doors which will lock and unlock simultaneously when the driver's or front passenger's door is locked or unlocked either with the inside locking switch or the key from outside.

Door locks may be operated manually in the conventional manner. The door lock system has an overload safety control which may render it inoperative. After a short delay, the overload safety control will automatically reset and allow the system to function normally again provided the overload condition does not still exist.

Glove Compartment

To lock, insert the key, rotate clockwise one half of a turn and then withdraw.

To unlock, insert the key and rotate anti-clockwise one half of a turn.

To open, squeeze the two slides of the catch together and pull towards you. To close, push lid firmly back into place. This will engage the catch.

Fuel Cap Lock (Where Fitted)

Lock or unlock with master key.

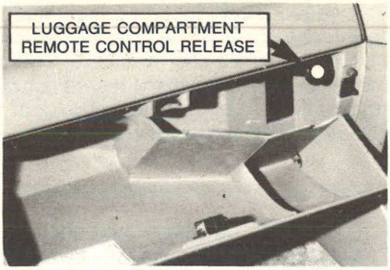
To unlock fuel cap, insert key and turn anti-clockwise. The cap can now be removed by turning in anti-clockwise direction.

Reinstall cap by turning clockwise until stop is reached. Lock cap by turning key in clockwise direction.

Sedan Luggage Compartment Lock

To unlock, turn the key clockwise. The lid opens automatically. The compartment lid locks automatically when pushed shut.

Remote Control Luggage Compartment Lock (Where Fitted)



In addition to the mechanical lock release, the luggage compartment lid may be provided with an electrically operated release system.

The luggage compartment lock may be released by depressing the push button switch located inside the glove compartment.

NOTE: If you leave your vehicle in a car park with the Service Key, ensure that the glove box compartment is locked so that access to the luggage compartment via the remote control lock button is prevented.

Wagon Rear Door Lock

To open the rear door insert the key and turn clockwise. Remove the key and push the button to open. Gas struts will automatically lift the door to the fully open position. The door should be relocked when it is closed again.

CAUTION: To prevent entry of dangerous exhaust fumes into the passenger compartment, the sedan luggage compartment lid and the wagon rear door should be closed during vehicle operation. However, if it is necessary to leave the lid or door open while transporting bulky cargo, all windows must be closed to avoid vacuum build-up. Open fresh air heater vents and switch to highest blower speed.

WINDOW CONTROLS

Manual

The door windows are lowered or raised by turning the winders which are fitted to each door.

Power (Where Fitted)

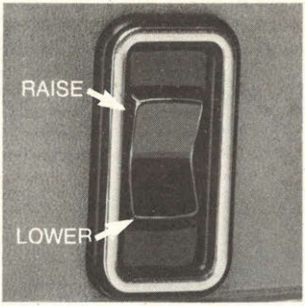
Where this option is fitted, the door window operating motors are connected through the ignition switch so that they cannot be operated unless the key is in the ON position.

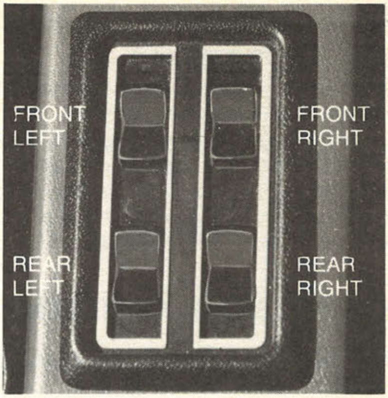
The master control for the windows is fitted in the console. Both rear door windows can also be operated by individual switches located in the doors. An isolation switch (the large knob) located on the lower section of the instrument panel to the right of the steering column will override and isolate the rear window switches. The power window system has an overload circuit breaker which may render it inoperative. After a short delay, the circuit breaker will automatically reset and allow the system to function normally again provided the Overload condition does not still exist.

Power Switch Operation

Main Control Panel (fitted in console)
To Raise — Push forward section of respective switch.
To Lower — Push rearward section of respective switch.

Individual Controls (fitted in rear doors)
To Raise — Push upper section of switch.
To Lower — Push lower section of switch.





REAR VISION MIRRORS

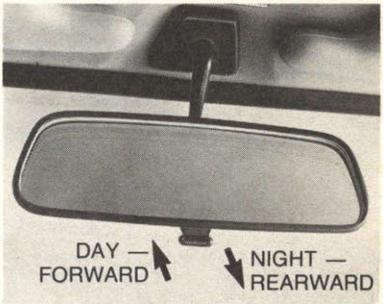
Inside Mirror

This is shatter-resistant, and mounted in such a way that it can be knocked out in case of accident to reduce the risk of injury.

Anti-Glare Inside Mirror

Where the anti-glare mirror is fitted, a control lever on the lower edge of the mirror enables an anti-glare reflector to be used during night driving. This reduces headlamp glare from following vehicles.

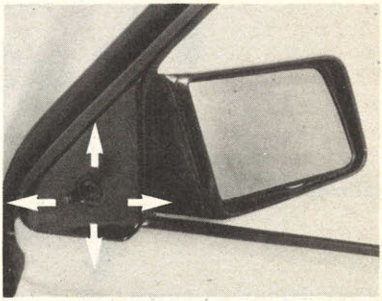
During normal daylight operation, the lever should be set forward away from driver. To reduce glare at night, move the lever backwards towards driver.



Outside Mirror (Also refer to page 187)

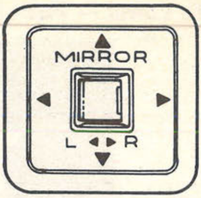
This mirror for the driver's door is controlled by the stalk that is located on the inside of the driver's door. On some models a like mirror is fitted to the passenger's door and is similarly controlled.

The angle of the mirror can be controlled by moving the stalk. The change of angle of the mirror is in the same direction as the control movement. When selecting the most suitable angle for the mirror, ensure that the driver's head is in the normal position for driving then adjust the mirror angle to suit.



Outside Mirror — Electrically Controlled (Where Fitted)

(Also refer to page 187)



Adjustment of these mirrors is achieved via a remote control switch mounted on the centre console.

Left/Right mirror selection is by means of a toggle switch located centrally within the main switch. Mirror adjustment is achieved by depressing the main multi position switch in the direction indicated by the arrows. To operate the mirrors the ignition key should be in the 'ACC' or 'ON' position.

FRONT SEAT ADJUSTMENT

Front Seat Forward and Backward Setting

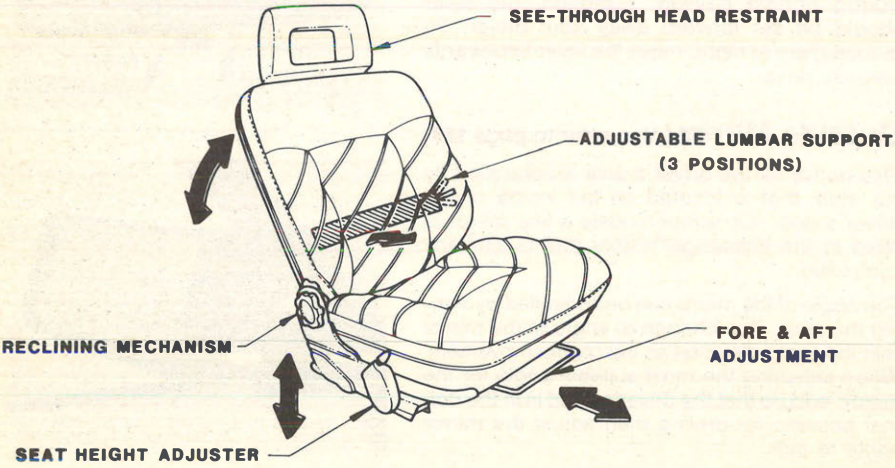
Lift the bar at the front of the seat upwards then slide the seat to the desired position. Release the bar. Try to move the seat back and forth to check that the catch is fully engaged. Adjustment should not be made when the vehicle is moving. The seat could move suddenly and cause the driver to lose control of the vehicle.

NOTE: It is possible to gain an extra 40 mm of rearward adjustment on the driver's seat by removing the limit screw from the guide rail. See your GMH dealer if you require this work to be performed.

Reclining Back Control

The reclining back is controlled by a large toothed wheel at the bottom of the outer side of the seat. By turning the wheel, the reclining position of the seat can be changed through a large angle. The seat back will move in the same direction as the top of the wheel.

SEAT ADJUSTMENT


SEE-THROUGH HEAD RESTRAINT
ADJUSTABLE LUMBAR SUPPORT (3 POSITIONS)
RECLINING MECHANISM
FORE & AFT ADJUSTMENT
SEAT HEIGHT ADJUSTER

Seat Height Adjustment

(Where Fitted)

The driver's seat height is adjustable by extending the telescopic lever on the seat outer side and then moving lever as follows:

To lower seat — move lever towards front of vehicle.
To raise seat — move lever towards rear of vehicle.

Head-Restraint

This safety feature is not intended to be used as a headrest. It is solely for the reduction of possible injury that may result from a whip-lash neck movement following a vehicle collision. The head restraints are not adjustable in height.

Lumbar Support (Where Fitted)

This feature is fitted to the driver's seat only and is adjusted by moving the lever situated on the inner (passenger) side of the back seat. The lumbar support can be adjusted to suit the degree of seat firmness that you require to support the middle of your back.

WAGON FOLD DOWN REAR SEAT

CAUTION: When converting the rear seat always avoid standing on the driver's side if the vehicle is parked at the kerb. Failure to do so could result in personal injury from passing vehicles.

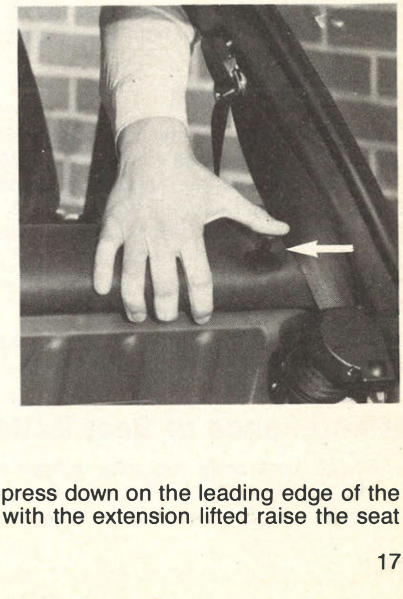
Procedure for Folding Down Rear Seat

The rear seat may be converted even when the front seat is adjusted to the rearmost position.

Step 1 — To unlock the safety catches, depress either of the buttons located on the upper edge of the back of rear seat.

Step 2 — The seat back can then be pulled forward allowing the spring hinged floor extension to automatically fold forward.

Step 3 — By pressing the seat-back downwards to compress the seat cushions, the hinged floor extension will drop into place. Apply pressure to the extension and it will lock into into its correct position.



Converting the Rear Seat

To return the rear seat to its normal position, 1: press down on the leading edge of the seat back and lift the hinged floor extension. 2: with the extension lifted raise the seat back into its position. Ensure that the seat back is secure in the lock position on both sides and that the seat belts are free of the seat back.

SEAT BELTS

Study this section carefully. It is important that you understand how to correctly wear a seat belt. You should also ensure that all occupants wear a properly adjusted seat belt or child restraint system if applicable, whenever the vehicle is moving.

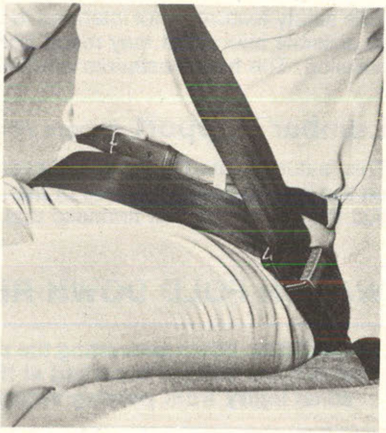
Retractor Belts

To put on a retractor seat belt, pull the metal tongue across your body and clip it into the buckle. When the metal tongue has locked safely into place you will hear a "click". After fastening, settle the belt by running your hand under the belt starting at the hip, go across to the buckle, then up under the sash. Any extra belt length will retract automatically.

The lap section should be worn as low as possible on your hips, not on your waist. Make sure the sash and lap sections of the seat belt are free from twists and are fitting firmly.

The emergency-locking retractor belt allows you to move freely while the vehicle is travelling normally. The belt will lock immediately on fast braking, impact with a solid object or any quick movement by the wearer.

To release the belt, press the release button on the buckle and allow the belt to retract. Check that it fully retracts without twisting or turning.

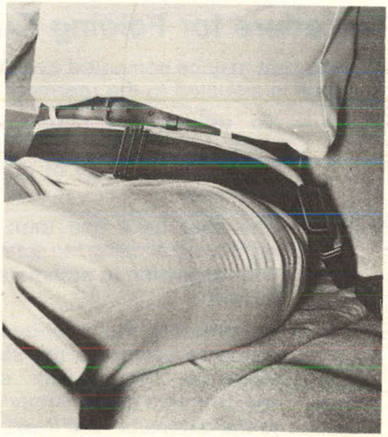


Lap-Type Belts

To adjust: Settle yourself comfortably. Bring the tongue adjuster across your body and clip it into the buckle. When the metal tongue has locked safely into place you will hear a "click". Make sure the belt is fitting firmly across the lower hip area and not across your waist.

To shorten: Tilt the tongue adjuster and pull the belt through the belt adjuster.

To lengthen: Tilt the tongue adjuster and pull the belt from just below the finger grip bar.



Maintenance of Seat Belts

- Check seat belts regularly. Replace the belts if they become frayed or damaged. The buckle and retractor mechanism operations should also be checked. Your GM-H Dealer will do these things as part of the scheduled maintenance plan.

- Seat belts must be replaced if they have been in use during a severe impact — even if there is no obvious damage.
- Clean belts only with a solution of mild soap and lukewarm water. Never use bleach.

WARNING: Seat belts are designed to bear upon the bony structure of the body, and should be worn low across the front of the pelvis, or the pelvis, chest and shoulders, as applicable; wearing the lap section of the belt across the abdominal area must be avoided.

Seat belts should be adjusted as firmly as possible, consistent with comfort, to provide the protection for which they have been designed. A slack belt will greatly reduce the protection afforded to the wearer.

Care should be taken to avoid contamination of the webbing with polishes, oils and chemicals, and particularly battery acid. Cleaning may safely be carried out using mild soap and water. The belt should be replaced if webbing becomes frayed, contaminated or damaged.

It is essential to replace the entire assembly after it has been worn in a severe impact even if damage to the assembly is not obvious.

Belts should not be worn with straps twisted.

Each seat belt assembly must only be used by one occupant; it is dangerous to put a belt around a child being carried on the occupant's lap.

No modifications or additions should be made by the user which will either prevent the seat belt adjusting devices from operating to remove slack, or prevent the seat belt assembly from being adjusted to remove slack.

The positioning of the tongue restrictor must never interfere with or stop the belt from fully retracting.

INFANT AND CHILD RESTRAINTS

CHILDREN SHOULD BE RESTRAINED AT ALL TIMES WHEN RIDING IN A MOTOR VEHICLE.

In some states it is Law that children must be belted in whenever they are travelling in a vehicle in which seat belts are installed. CHILDREN ABLE TO SIT UP should be restrained with the regular seat belt or an approved child restraint.

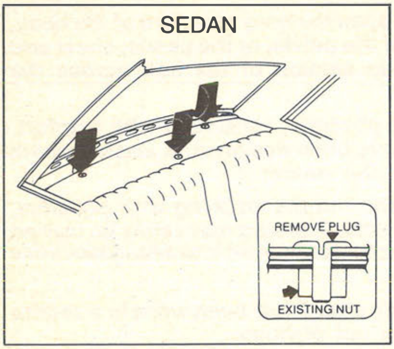
Where children are restrained with the regular seat belt and it is desired to raise their seating position this is to be done only by means of a support which is retained by the belt. NEVER USE A LOOSE CUSHION AS THIS COULD ALLOW SERIOUS INJURY IN THE CASE OF VEHICLE COLLISION.

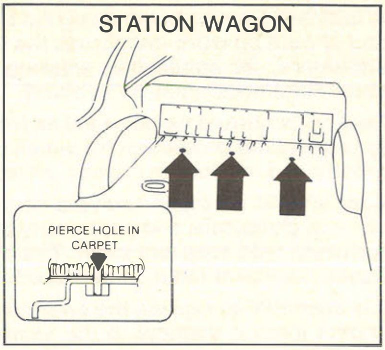
Child Restraint Anchorages

Your vehicle is fitted with upper anchorage points for child restraints and these are located as follows:

Sedan
Anchorage points are located on the rear window ledge. Remove the plugs and install child restraints with the correct anchor bolts.

Wagon
Anchorage points are located on the floor behind the rear seat. Remove the plugs and install child restraints with the correct anchor bolts.


SEDAN
REMOVE PLUG
EXISTING NUT


STATION WAGON
PIERCE HOLE IN CARPET

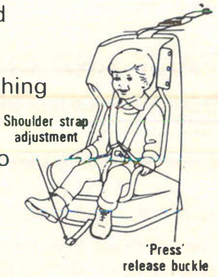
WARNING: Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnesses.

Only approved child restraint harnesses should be used on anchorage points. See your GM-H Dealer for advice about the various types of approved child restraints available.

INFANTS UNABLE TO SIT BY THEMSELVES should be carried in a padded bassinet or carry basket placed across the back seat.

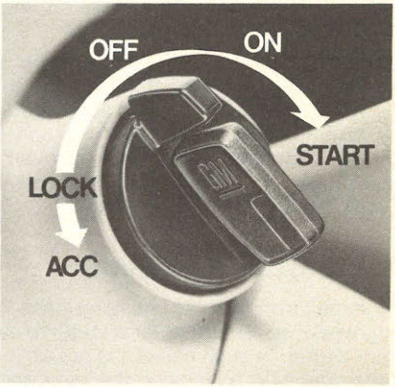
A suitable type of bassinet restraining system should be used.

The GM Child Love Seat is designed for children weighing 9 to 19 kg, up to 1 metre in height, who are able to sit up alone.


Shoulder strap adjustment
'Press' release buckle

SECTION 1D STEERING COLUMN CONTROLS

IGNITION LOCK



The anti-theft lock is positioned on the right side of the steering column. It has five positions.

ACC (1st Back from Lock) — Permits operation of accessories when the engine is not running. To engage, push the key in and turn toward you (counterclockwise).

LOCK (Normal Parking Position) — Locks the ignition when the key is removed and provides an added theft protection by preventing operation of the steering wheel.

OFF (1st Forward from Lock) — Permits turning the engine off without locking the steering wheel.

ON (2nd Forward from Lock) — Normal operating position. The ignition circuit and the electrically operated instruments are energised.

START (3rd Forward from Lock) — This cranks the engine. Immediately the engine starts take your hand off the key and allow it to return to **ON** position.

CAUTION: Do not turn the engine off while the vehicle is in motion as this renders ineffective any power assisted equipment operated off the engine. Never remove the key while the vehicle is in motion as this will lock the steering of the vehicle.

NOTE: If the steering lock is difficult to disengage when the vehicle has been parked with the tyres hard up against the kerb or with the steering wheel off-centre it may be necessary to rotate the steering wheel to free up the ignition steering lock.

POWER STEERING (Where Fitted)

This system has been designed to reduce steering effort. It uses hydraulic pressure to lighten steering loads and is designed so that "road feel" is retained. Care should be taken not to hold a turning force on the steering wheel when stationary (i.e. when waiting before turning a corner, etc.) as this creates unnecessary, high operating pressures within the system.

If the power steering is rendered ineffective because the engine has stalled, the drive belt broken or if the pump reservoir is empty of fluid, the car can still be steered. However, due to the much greater effort required to steer, it is recommended that you have the problem fixed promptly.

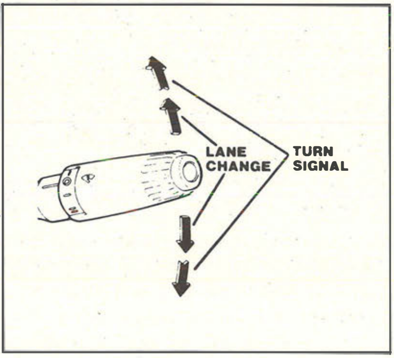
MULTIFUNCTION LEVER
(Turn Signal/Headlamp Dipping/Wiper-Washer)

The multifunction lever on the right side of the steering column is for turn signal operation, windshield wiper/washer and headlight high-beam and low-beam.

Turn Signal

To signal a left turn push the lever right up. To signal a right turn push the lever right down. When the turn is completed, the signal will cancel automatically and the lever will return to the neutral position.

The green turn signal indicator lights mounted in the intsrument panel are designed to flash to tell you that the front and rear turn signal lights are working. They are accompanied by an audible clicking sound. If the green indicator lights do not flash, start to flash slower or faster than usual or if you cannot hear them clicking have them checked promptly.

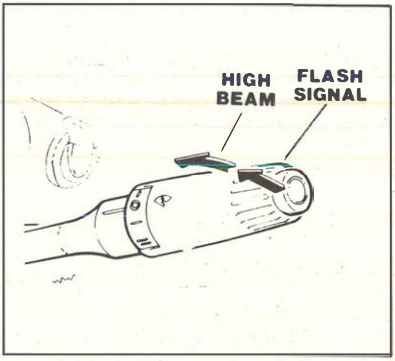


Lane Change Signal

In some turns, such as changing lanes, the steering wheel is not turned far enough to cancel the turn signal. In such cases it is possible to signal lane changing by moving the lever part way (to the first stop) and holding it there. The lever will return to the neutral position when you release it.

Headlamp Dipping

With the headlights on, pull the lever towards you until you hear a click, then release it. The headlights will change from low-beam to high-beam or from high-beam to low-beam. When the high-beams are on, a blue light located on the instrument panel will glow. It is also possible to flash the high-beam for signalling purposes, with the headlight switch turned off, by moving the lever towards you. A light resistance will be felt at the flash position. Further movement towards you will cause the dip switch to operate. The lights will remain on high-beam as long as the lever is held.



Windshield Wipers and Washers

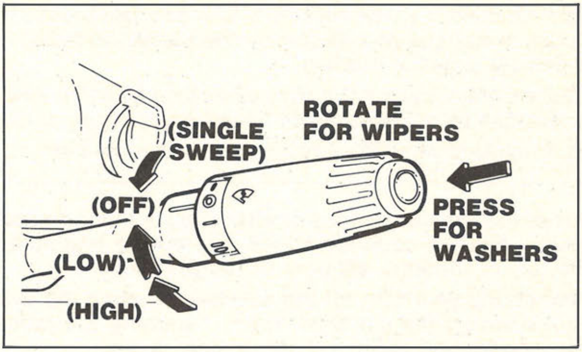
The wiper and washer mechanisms operate when the ignition switch is in either the ON or ACC positions.

Wiper Operation — The windshield wipers are operated by turning the end of the lever clockwise from the O position.

– Position for slow wiper speed.
= Position for fast wiper speed.

To stop the wipers, turn the lever back to the O position. An extra position is provided which operates the wipers for a single sweep only. From the O position turn the lever anti-clockwise to the 1 position and release. The lever will return to the O position and the wipers will sweep once across the windscreen and return to their rest position.

Washer Operation — By depressing the button on the end of the lever the electric washer pump is activated, spraying jets of fluid onto the area swept by the wiper blades. If the windshield wipers are not in operation at the time, depressing the button on the lever will automatically start them operating on slow speed and keep the wipers operating until turned off.

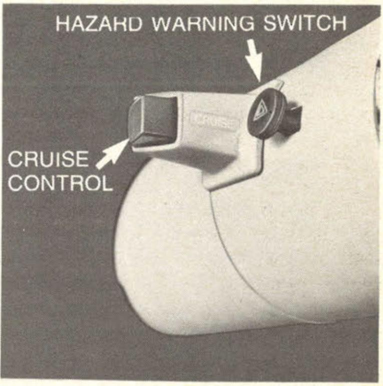


HORN

The horn is operated by pressing the pad in the centre of the steering wheel. The horn can be operated at any time regardless of the ignition switch position.

HAZARD WARNING SWITCH

This is the button located at the left side of the steering column just below the steering wheel. The operation and use of the hazard warning flasher is covered in 'In Case of Emergency' Section 3.



CRUISE CONTROL (Where Fitted)

The Cruise Control is an automatic speed control system, which allows the driver to control his speed over a wide range of operating conditions. Within the engine limitations, and above 50 km/h a constant speed can be held, thus increasing comfort and economy on freeways, highways and open roads.

How to Operate

The Cruise Control system is activated by accelerating to the desired speed, then depressing and slowly releasing the control button on the left side of the steering column.

You may then remove your foot from the accelerator pedal. The car's speed will be automatically maintained. Car speed may be increased for highway passing and the system overriden simply by depressing the accelerator pedal. The system will automatically return to its previous setting once the accelerator is released.

To permanently increase speed while the Cruise Control is engaged, simply accelerate to the desired speed, then depress the control button and release slowly.

Disengagement

To decrease speed once the system is engaged, depress the brake pedal lightly. When the desired speed is reached, it will be necessary to once again press the Cruise Control button. Speed reduction may also be achieved by depressing the button fully and holding it firmly until the desired speed is reached.

The automatic Cruise Control system is instantly released by lightly touching the brake. Once off, the system can be activated again by using the control button.

The system is also released when the ignition system is turned off.

CAUTION: Do not use the Cruise Control when road or driving conditions could require varying speeds. A constant speed may not be practical in heavy or varying traffic, or on winding, slippery or rough roads.

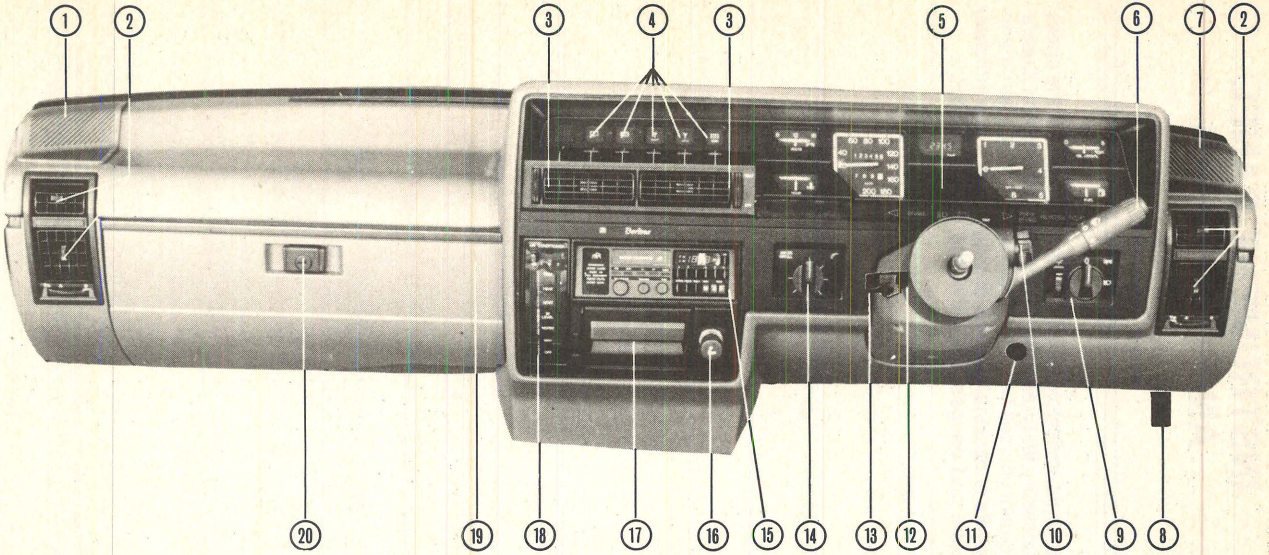
Remember that taking your foot off the accelerator when the Cruise Control is engaged does not let the car slow down. Touching the brake pedal will disengage the system and allow the car to slow down.

When going up or down hills, (particularly when towing a trailer) it is possible for the car to gain or lose speed even though the Cruise Control is operating. In that case, you may need to disengage the system and resume manual speed control.

SECTION 1E

INSTRUMENT PANEL AND CONTROLS

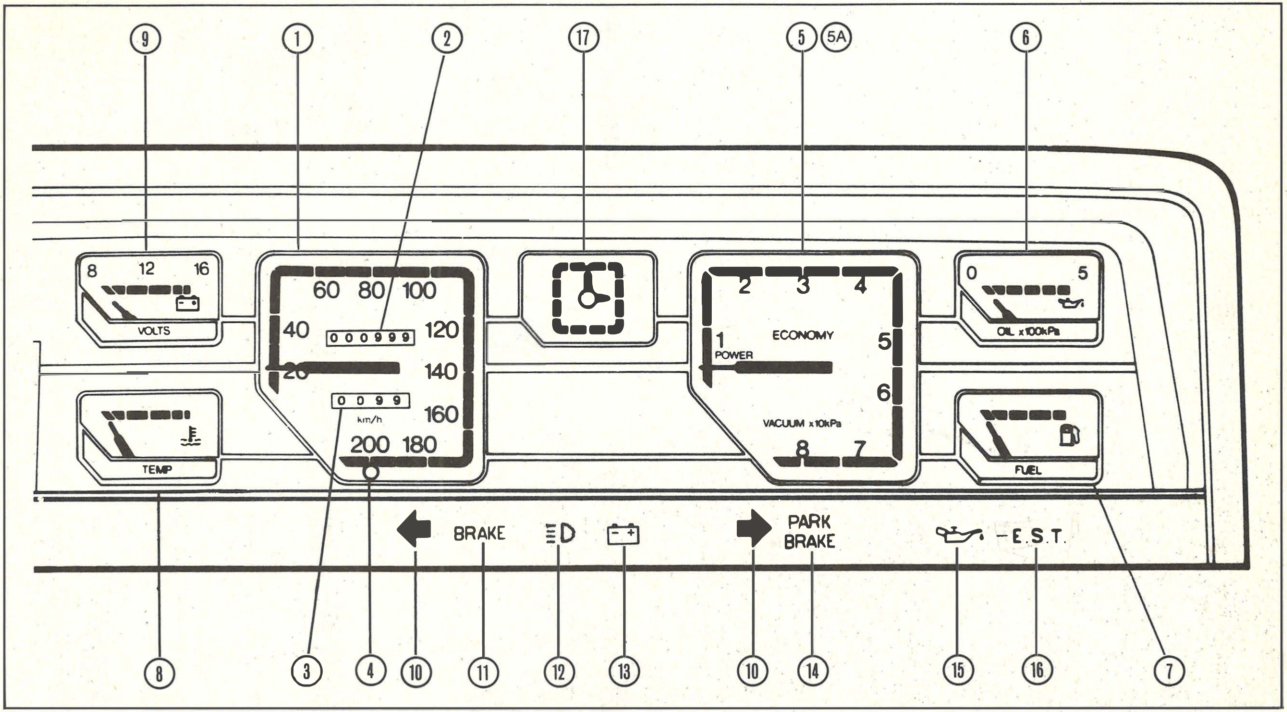
The instrument panel contains instruments, indicators, and controls necessary for the operation of many of the standard and accessory features. Review the instructions and illustrations contained in this section to acquaint yourself with the proper use of these instruments and controls. Glance at the instruments occasionally whilst driving to see if any indicator light is on, and to see that all meters and gauges are within the proper ranges.



NOTE: Some instruments and controls are standard on certain models and may or may not be available as options on other models. Fittings which are NOT found on all models are denoted with an asterisk*.

1. Left Hand Speaker*
2. Side Air Vents
3. Centre Air Vents
4. Touch Control Switches
5. Combined Instrument Assembly and Warning Light Panel Standard or Electronic*
6. Combined Turn Signal/Headlamp Dipping/Washer-Wiper Switch
7. Right Hand Speaker*
8. Engine Hood Release Lever
9. Light Switch
10. Ignition/Starter Switch
11. Rear Window Isolation Switch*
12. Hazard Warning Switch
13. Cruise Control Button*
14. Wiper Dwell Control*
15. Radio/Radio and Stereo Cassette Player
16. Cigarette Lighter
17. Ash Tray
18. Heater/Air Conditioner* Controls
19. Remote Control Luggage Compartment Lid Release* (inside Glovebox)
20. Glove Box Lock

COMBINED INSTRUMENT ASSEMBLY AND WARNING LIGHT PANEL (STANDARD)


9
1
2
17
5
5A
6
8
12
16
VOLTS
60
80
100
40
000999
120
20
140
0099
160
km/h
200
180
TEMP
2
3
4
1
POWER
ECONOMY
5
6
VACUUM x10kPa
8
7
0
5
OIL x100kPa
FUEL
BRAKE
PARK
BRAKE
– E.S.T.
8
3
4
10
11
12
13
10
14
15
16
7

1. Speedometer
2. Odometer
3. Tripmeter
4. Tripmeter Reset Button
5. Fuel Economy Gauge

5A. Tachometer (where fitted)

6. Oil Pressure Gauge (where fitted)
7. Fuel Gauge
8. Coolant Temperature Gauge
9. Voltmeter (where fitted)
10. Turn Signal Indicator
11. Brake Failure Warning Light
12. High Beam Indicator Light
13. Generator Warning Light
14. Park Brake Warning Light
15. Oil Pressure Warning Light (where fitted)
16. Electronic Spark Timing Warning Light
17. Clock

1. SPEEDOMETER

The speedometer is calibrated from 0 to 200 kilometres per hour (km/h).

2. ODOMETER

The odometer is incorporated into the speedometer face and records accumulated distance travelled in kilometres.

3. TRIPMETER

A Tripmeter, which is also set into the speedometer face is used to record the distance travelled on a particular trip.

4. TRIPMETER RESET BUTTON

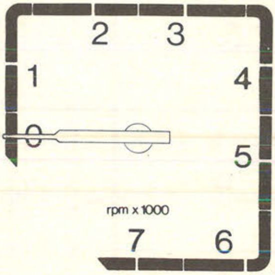
The Tripmeter is set to zero by the push button.

5. FUEL ECONOMY GAUGE

By monitoring the intake manifold vacuum, this gauge gives a reading which indicates how hard the engine is working. The RED mark areas indicate high engine load. For a detailed description on how to use the readings on this gauge to obtain optimum fuel economy from your vehicle, refer to "How to Improve Fuel Economy" in Section 2 of this handbook.

5A. TACHOMETER (where fitted)

The tachometer records engine speed in revolutions per minute (r.p.m.) and is graduated from 0 to approximately 7,200 r.p.m. The section from 5,500 r.p.m. upwards is indicated in RED and continued or sustained operation in this section could cause serious engine damage.



6. OIL PRESSURE GAUGE (where fitted)

The oil pressure gauge indicates the relative operating pressure within the engine lubricating system. Should the gauge fail to indicate a reading after starting the engine or if the needle moves towards either RED section (indicating low or high pressure) when the engine is running above idle speed, you should stop the engine as soon as possible. The reason for the loss of oil pressure or the buildup of excessive pressure should be found and corrective action taken.

7. FUEL GAUGE

This gauge is electrically operated to indicate the proportionate amount of fuel contained in the fuel tank. The gauge is activated when the ignition switch is turned to the "ON" position. Refer to "Specifications" Section 7 for fuel tank capacities.

8. COOLANT TEMPERATURE GAUGE

This gauge is calibrated to indicate the relative operating temperature of the engine cooling system. If the needle reaches the RED section (indicating high temperature) the engine should be stopped and the reason for the high temperature determined. (Refer to Section 3 for instructions on what to do if your engine overheats.)

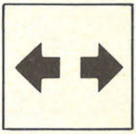
9. VOLTMETER (where fitted)

The voltmeter indicates the condition of the electrical charging system. Normally the needle will remain in the white band operating area of the gauge between 12 to 15 Volts approximately.

Needle movement to the left red zone indicates a low voltage condition. Needle movement to the right red zone indicates a high voltage condition.

In either of these cases, the electrical charging system will require checking; items such as the battery, voltage regulator, drive belt or wiring and connections could be affected. A generator charge indicator light is incorporated in the warning light panel and this light will glow to indicate a low voltage condition.

10. TURN SIGNAL INDICATORS



There are two arrow-head turn signal indicators which glow green when they are activated. The appropriate indicator will flash in the direction signalled by the turn signal lever.

Both green arrow-head turn signal indicators will flash continuously when the Hazard Warning Flasher button located on the left side of the steering column is depressed. (Refer Section 3 "In Case of Emergency".)

11. BRAKE FAILURE WARNING

BRAKE

This light glows red when ignition switch is turned to the start position and the engine is cranking. This indicates the electrical circuit is functioning. It will cease to glow when the key is released and returns to the "ON" position. If the red sign glows at any other time, it indicates that there may be something wrong with the braking system.

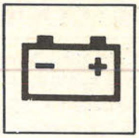
Immediately the indicator light glows under these conditions, stop on the side of the road as carefully as possible. Do not proceed until satisfied that cautious progress is possible or that the cause of the problem has been located and rectified.

(Reference should be made to brake operations described in Section 2, "Starting, Driving and Towing".)

12. HIGH-BEAM INDICATOR

When the headlamps are on high-beam a blue signal located on the Indicator Light Cluster will glow.

13. GENERATOR WARNING



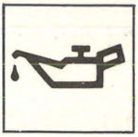
This red symbol will glow when the ignition switch is turned to the "ON" position. After the engine has been started, the light will turn off and remain off. If the light should glow while the engine is running it indicates that the generator is not charging. You should stop the engine and check the generator drive belt for looseness or breakage. If the belt is okay, there is a problem somewhere in the charging system. The problem should be corrected as soon as possible.

14. PARKING BRAKE WARNING

PARK
BRAKE

When the parking brake is applied with the ignition switch in the "ON" position, the red sign will glow until the parking brake is fully released.

15. OIL PRESSURE WARNING (where fitted)



The red symbol will glow when the ignition switch is turned to the "ON" position. After the engine has been started, the light will turn off and remain off. If the light should glow when the engine is running above idle speed, stop the engine and do not operate it until the cause of **low** oil pressure is corrected.

16. ELECTRONIC SPARK TIMING WARNING

EST

The EST light is designed to warn you of any operating problems in the engine electronic spark timing control system. This light will come on during engine starting to indicate that the system is working. It should go off after the engine is running.

If the warning light comes on then goes off while driving it is an indication that a temporary problem has been cleared.

If the light comes on and stays on while driving it could mean either of two things:

Firstly, that the computer which controls the system has detected an operating fault with one of the sensors that provides it with data. In this case the computer assumes a normal operating value for that sensor and continues to supply the engine with a spark timing value, although not necessarily the optimum value.

Secondly, it could mean that there is a malfunction in the computer module itself. In this case the system will revert to a basic spark timing which enables the vehicle to remain operational although at a reduced performance level.

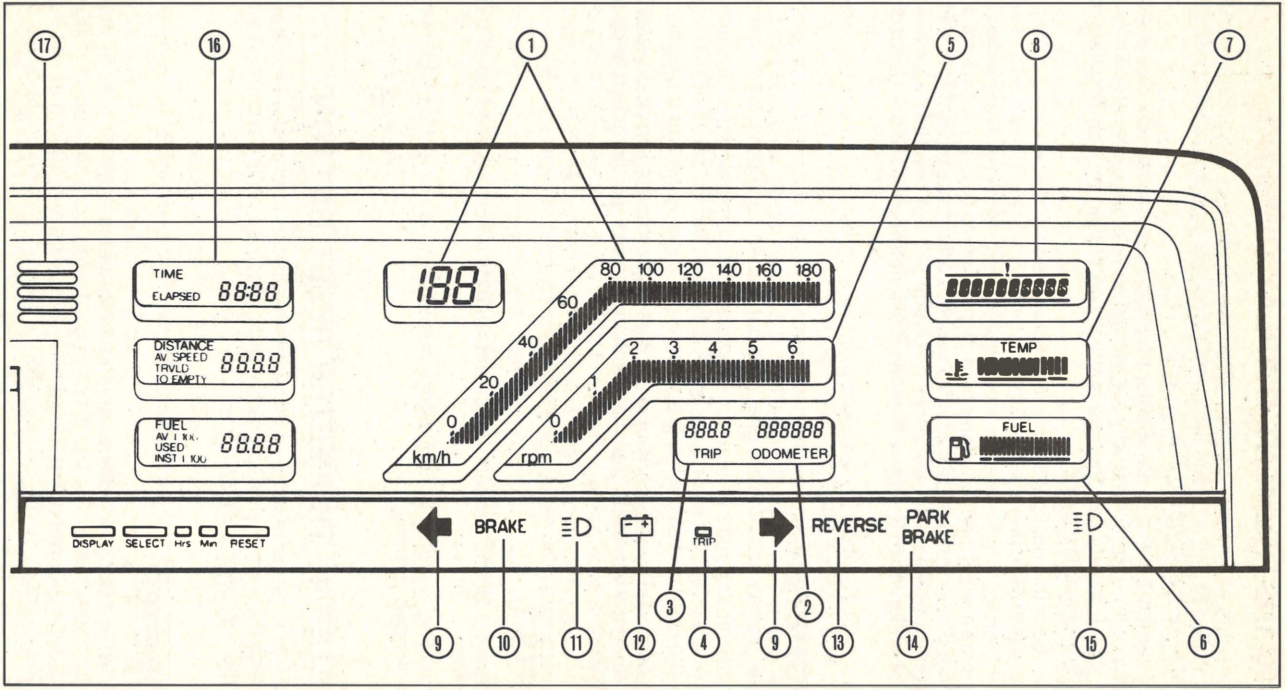
If the light comes on regularly during subsequent engine operation you should see a GMH Dealer as soon as convenient for rectification of the problem.

NOTE: Extensive driving of the vehicle with EST warning light on could have a detrimental effect on fuel economy, engine performance and engine operating temperature.

17. CLOCK

This clock is electrically energized and operates continuously while the battery is connected. The time setting is adjusted by turning the knob in the centre of the clock face to engage and rotate the dial hands.

COMBINED INSTRUMENT ASSEMBLY AND WARNING LIGHT PANEL — ELECTRONIC (Where Fitted)


17
16
1
5
8
7
TIME
ELAPSED 88:88
DISTANCE
AV SPEED
TRVLD
TO EMPTY
88.8.8
FUEL
AV I 100
USED
INST I 100
88.8.8
188
80 100 120 140 160 180
60
40
20
0
km/h
2 3 4 5 6
1
0
rpm
888.8
TRIP
888888
ODOMETER
TEMP
FUEL
DISPLAY
SELECT
Hrs
Min
RESET
BRAKE
TRIP
REVERSE
PARK BRAKE
3
2
9
10
11
12
4
9
13
14
15
6

1. Speedometer (Digital Readout and Bar Graph)
2. Odometer
3. Tripmeter
4. Tripmeter Reset Button
5. Tachometer
6. Fuel Gauge
7. Coolant Temperature Gauge
8. Alpha Warning Display
9. Turn Signal Indicator
10. Brake Failure Warning Light
11. High Beam Indicator Light
12. Generator Warning Light
13. Reverse Indicator
14. Park Brake Warning Light
15. "Lights On" Indicator
16. Trip Computer and Control Buttons
17. Audible Warning Buzzer

9. TURN SIGNAL INDICATORS

⬅ ➡

There are two arrow-head turn signal indicators which glow green when they are activated. The appropriate indicator will flash in the direction signalled by the turn signal lever.

Both green arrow-head turn signal indicators will flash continuously when the Hazard Warning Flasher button located on the left side of the steering column is depressed. (Refer Section 3 "In Case of Emergency".)

10. BRAKE FAILURE WARNING

BRAKE

This light glows red when ignition switch is turned to the start position and the engine is cranking. This indicates the electrical circuit is functioning. It will cease to glow when the key is released and returns to the "ON" position. If the red sign glows at any other time, it indicates that there may be something wrong with the braking system.

Immediately the indicator light glows under these conditions, stop on the side of the road as carefully as possible. Do not proceed until satisfied that cautious progress is possible or that the cause of the problem has been located and rectified. (Reference should be made to brake operations described in Section 2, "Starting and Driving".)

NOTE: An audible warning "beep" will sound when this warning light comes on.

11. HIGH-BEAM INDICATOR

When the headlamps are on high-beam a blue signal located on the Warning Light Panel will glow.

12. GENERATOR WARNING

- +

This red symbol will glow when the ignition switch is turned to the "ON" position. After the engine has been started, the light will turn off and remain off. If the light should glow while the engine is running it indicates that the generator is not charging. You should stop the engine and check the generator drive belt for looseness or breakage. If the belt is okay, there is a problem somewhere in the charging system. The problem should be corrected as soon as possible.

13. REVERSE INDICATOR

REVERSE

This light glows when the transmission is shifted into "R" (reverse gear) with the ignition ON.

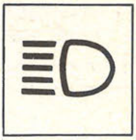
14. PARKING BRAKE WARNING

PARK
BRAKE

When the parking brake is applied with the ignition ON, the red sign will glow until the parking brake is fully released.

NOTE: An audible warning will sound if the parking brake is on and the vehicle travels over 5 km/hr.

15. ‘LIGHTS ON’ INDICATOR



This symbol, located at the right hand side of the warning light panel, will glow orange to warn you that the headlights are still switched on with the ignition off.

16. TRIP COMPUTER AND CLOCK

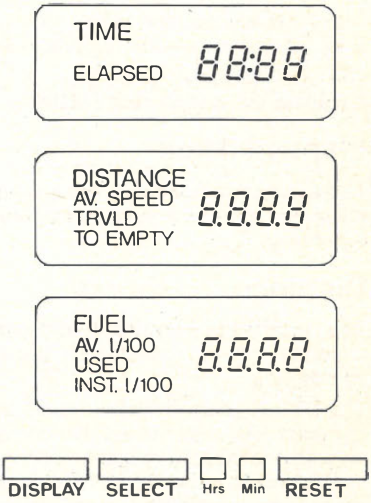
The computer is an integral part of the electronic instruments and has three displays; time, distance and fuel. The eight different items of information available are as follows:

TIME — Time
— Elapsed

DISTANCE — Average speed (km/hr)
— Travelled (kilometres)
— To Empty (kilometres)

FUEL — Average (litres/100 km)
— Used (litres)
— Instantaneous (litres/100 km)

Three functions are displayed simultaneously, one from each display of "time", "distance" and "fuel", and are called up in sequence by depressing the select button i.e. each time the select button is pressed, the function in each display will increment by one.



"Time and "Elapsed Time" alternate with other functions, giving a variable combination of time with other functions.

The control buttons are located below the displays and are:—

(1) DISPLAY (Displays time with ignition off)
(2) SELECT (Increments functions displayed)
(3) HOURS (Adjusts hours when pressed with display button)
(4) MINUTES (Adjusts minutes when pressed with display button)
(5) RESET (Resets computer when pressed with select button)

To avoid accidental reset, time adjustment or calibration, a combination of two buttons must be pressed simultaneously to perform these operations.

Resetting

To reset the computer, firstly depress and hold the "Reset" button and then momentarily depress the "Select" button. Resetting will not affect Time or Distance to Empty function however, all other functions will go to zero.

The computer can be reset anytime, however, the following is considered normal practice:

— at each fuel tank refill. The computer will then give you results that are averaged out over each tank full of fuel.

— at beginning of a trip. This might involve many tank refills and results will then be computed over the total journey.

If the battery is disconnected and reconnected for some reason, the computer will need to be reset to ensure correct operation.

Time

The clock is a 12 hour clock with flashing decimal point. When the battery is first connected the clock will show 12.00 and if this not the correct time, the appropriate setting is achieved by pressing the "Display" and "Min" buttons together for minute adjustment and the "Display" and "Hrs" buttons for hour adjustment.

It is recommended that the minutes be adjusted prior to the hours because as the minutes pass 60, the hours will automatically increment by one.

The clock can be accurately set as the next minute will not display until 60 seconds after releasing the adjustment button.

Elapsed Time

This function indicates accumulated "ignition on" time, since last reset. The display will show hours and minutes up to 12 hours and 59 minutes — then returns to 1 hour and 0 minutes.

Distance To Empty

The Distance to Empty function is an estimate on how much further the vehicle can be driven on the fuel remaining in the tank, based on the rate of fuel usage for the previous 15 minutes.

The DTE readout adjusts in 5 km increments for values in excess of 50 km and whole numbers below this value. No computer can predict the future so the DTE function can only be an estimate based on previously obtained information. For this reason, as conditions become more suited for economical driving the Distance To Empty can actually increase, for example, from city to highway driving.

After initial battery connection DTE will start at 500, the computer will then perform an initial update from a short average prior to commencing the normal long averaging process.

A built-in safety feature allows up to approximately 30 km of driving under highway conditions after DTE shows zero, however, due to tolerance variations on the components from which the computer derives its information, this figure will vary from vehicle to vehicle. The computer will not show some distance remaining to empty when vehicle is out of fuel.

The computer has electronic damping to flatten out fluctuations of fuel level in the tank and rate of fuel usage and will update the readout after consumption of 0.32 litres of fuel approximately.

Due to the large fuel level fluctuations whilst mobile, the readings are heavily damped and averaged over a long time — up to half an hour. This does not matter during normal operations but after a fuel fill a long delay to display a sensible DTE is not acceptable, so with a fill of 10 litres or more the computer will calculate a higher DTE from a short average at the next normal update and the long averaging will proceed from the new figure.

Distance Travelled/Calibrate

This function reads distance travelled in kilometres since the computer was reset showing to two decimal points up to 100 and whole numbers thereafter.

The calibrate function is designed to allow a very accurate distance calculation and is entered as follows:—

(1) Select Distance Travelled mode.

(2) Line up the vehicle against a known marker, e.g., centre pillar against a major highway shield.

(3) Press Reset and Hours buttons simultaneously and display will go to zero.

Drive off and the display will increment in whole numbers. Stop vehicle exactly 10 km from starting point, e.g. centre pillar against a major highway shield 10 km from original shield. The number appearing in the display at this point is termed the Calibration Number.

Press Reset and Minutes buttons simultaneously. When these buttons are released the Calibration Number will enter the computer memory and the display will return to Distance Travelled mode and show the total distance travelled since reset.

This calibration does not reset other functions back to zero.

The calibration number should be between 615 and 650 for standard vehicles however, special tyres, gearbox, axle, tyre pressures, vehicle loading etc. will have a bearing on this number.

Depressing the Reset and Minute buttons simultaneously any time the Distance Travelled/Calibrate function is called up will display the Calibration Number.

For those who do not wish to have this degree of accuracy (1 metre in 10 km) or who do not have access to an accurately measured 10 km, an approximate number of 625 is used for distance calculations.

When battery is first connected Calibration Number will automatically be 625. If required Calibration Number is known, select Travelled/Calibrated mode, press Reset and Hours buttons simultaneously, drive vehicle approximately 10 km until required Calibration Number is reached then press Reset and Minutes buttons simultaneously. Alternatively, recalibrate as described earlier.

Whilst in the calibrate mode, i.e. after the Reset and Hours buttons are pressed and prior to depression of the Reset and Minute buttons, the ''Select'' button is disconnected as selection of other functions during the calibration procedure would affect the Calibration Number and computer distance functions would be inaccurate.

Average Speed

The Average Speed reading displays average speed since the computer was reset. This average is calculated by dividing the distance travelled by the time that the ignition has been on.

To enable the computer to collect enough data to calculate a sensible speed the display will show zero for the first minute after reset.

Reading is updated at one minute intervals.

Instantaneous Consumption

The instantaneous fuel consumption function reads in litres/100 km in whole numbers only and updated at half second intervals.

When the vehicle is stationary the display shows zero, however, when slowing down to a stop due to fuel being used and a small distance being travelled, some large numbers may be displayed. Also when the function is first called up some large numbers may appear due to the small time frame over which the computation is prepared.

Average Consumption

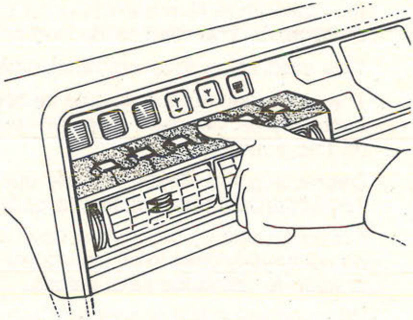
The Average Fuel Consumption reads in litres/100 km and calculates fuel usage since last reset and updates at approximately one minute intervals.

Fuel Used

Total fuel used since reset is measured in litres to a maximum of 999 litres.

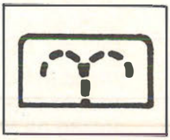
TOUCH CONTROL SWITCHES

These switches are activated by pressing the small raised finger pad in-line with the symbol representing the function you wish to operate.



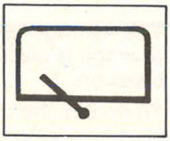
Rear Window Washer (Wagon)

The washer is operated with the ignition in the ''ACC'' or ''ON'' position. Water will spray on the window while the switch is depressed and will stop when you lift your finger off the switch.



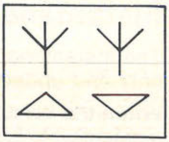
Rear Window Wiper (Wagon)

The rear window wiper operates with the ignition in ''ACC'' or ''ON'' position. To switch wiper on, momentarily depress touch switch, and to switch off, momentarily depress switch once more.



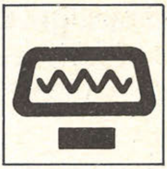
Radio Power Antenna

When the radio is switched on there is a slight delay before the power antenna will extend automatically to car roof height. The antenna can then be further extended or rectracted manually by pressing the appropriate touch control switch. When the radio is turned off or the ignition switch is turned to ''OFF'' or ''LOCK'' the power antenna will retract automatically after a delay of 10 to 15 seconds.



Rear Window Heater

The electrically heated rear window operates with the ignition in the "ON" position. To switch on, momentarily depress the touch switch and to switch off, momentarily depress the switch once more. An indicator light located underneath the symbol will glow when the heater is on. To avoid overloading the electrical system the heated rear window should only stay switched on until the rear window is clear. When cleaning the heated rear window take care not to damage the heating element.



OTHER SWITCHES AND CONTROLS

Cigarette Lighter

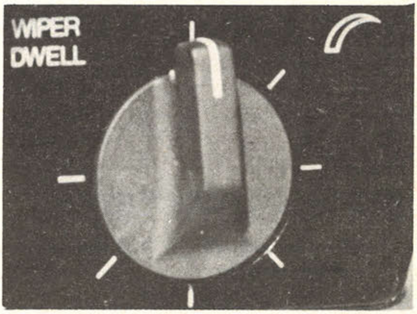
The cigarette lighter is activated only when the ignition switch is in the "ON" or "ACC" positions. To operate, simply press in the lighter knob. When the element is hot the lighter will automatically pop back to its original position ready for use.

Dwell Control (where fitted)

The dwell control switch regulates the dwell period between wiper blade sweeps. It is operated by turning the switch in a clockwise direction which progressively increases the dwell period between wiper blade sweeps.

Operation of the wiper blade speed control on the stalk in either slow or fast positions will override the dwell control setting. If the wiper speed control switch is returned to OFF position, the dwell control will take over at the particular setting being used.

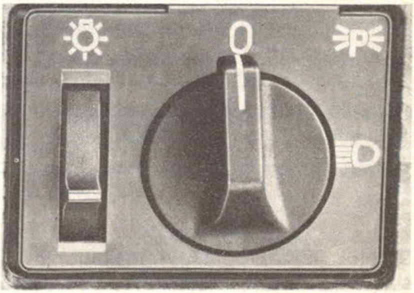
The dwell control operates with ignition in "ACC" or "ON" position.



Light Switch

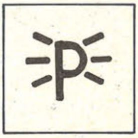
Headlamps, tail lamps, parking lamps, instrument lighting and interior lighting are controlled from a single switch located on the driver end of the lower instrument panel.

The various operating positions of the switch control the lamps in the following order —



Parking Light

Turning the light switch clockwise to first detent will switch on parking lights, tail lights and licence plate lights, as well as instrument lights.



Headlights

Turning the light switch fully clockwise to the last detent will, depending upon turn signal lever position, switch on headlight low or high beam. All lights activated in the first detent position remain on.

When headlights are on, high and low beam selection is made by pulling the turn signal lever towards the steering wheel. Each time the lever is moved in this direction the beam position will change, even with turn signals in operation.

Always use the low beam when approaching or following other road users.

Instrument Lighting Control

The brightness of the instrument lighting may be controlled by rotating the control wheel, the brightness decreasing as wheel is turned downwards and increasing when turned the other way with the light switch in one of the "ON" positions.

Courtesy Light Operation

To operate the main interior courtesy light, pull the light switch knob outwards.

VENTILATION SYSTEM

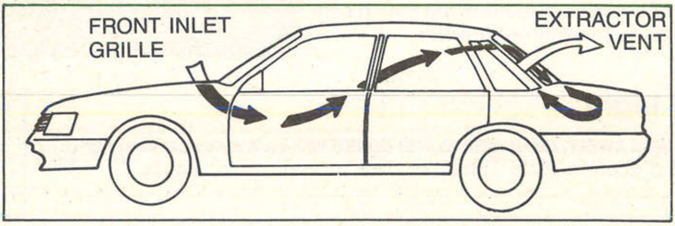
Your vehicle features a flow-through ventilation system which will operate with all the windows closed.

Outside air enters the vehicle through the grille in front of the windshield. It then passes through the heater or air conditioning system (if fitted) and enters the passenger compartment via the various air outlets described in the following item.

After passing through the passenger compartment the stale air is then exhausted from the vehicle through two extractor vents.

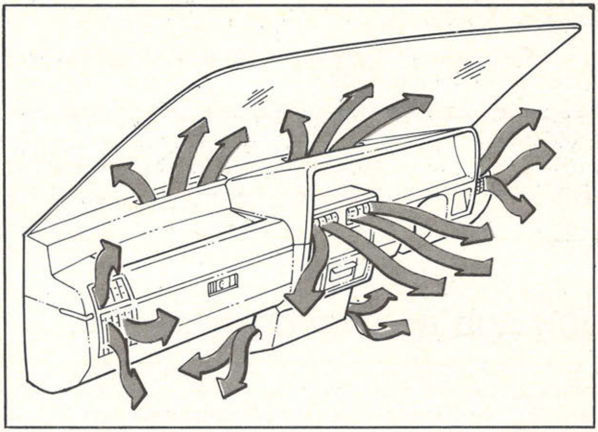
In sedan models these are located on the rear body pillar and in wagon models they are located in the roof near the tailgate hinges.

NOTE: Do not allow the inlet grille to be covered or clogged with leaves, snow, etc.



INTERIOR AIR OUTLETS (VENTS)

The various air outlets into the passenger compartment are shown in the illustration. The selection of particular outlets and control of temperature and/or air conditioning of the air is done via the Ventilation and Heater Control Panel or the Ventilation and Air Conditioning Control Panel (where fitted). Operation of these controls is described later in this section.



Screen Vent

These are fixed vents which direct air onto the windscreen for demisting purposes.

Floor Vent

These are fixed vents which direct air towards front occupants feet and legs.

Side Vents

With these vents it is possible to control the direction and flow of the air exiting from each end of the instrument panel.

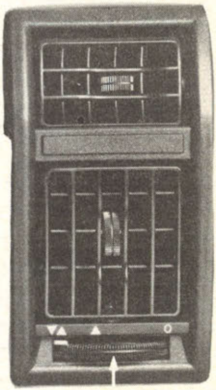
The air flow can be directed as required by tilting the vent inserts and swivelling the vanes. The upper vents in particular are suitable for demisting side windows.

The air supply is controlled by the regulating wheel which is situated below the lower vent.

▼▲ With the regulating wheel marker in the far left position air will flow from the upper and lower vents.

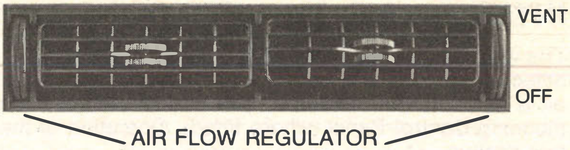
▲ With the regulating wheel marker in the centre position air will flow from the upper vent only.

○ With the regulating wheel marker in the far right position the air supply is shut off.



AIR FLOW
REGULATOR

Centre Vents



With these vents it is possible to control the direction and flow of the air exiting from the centre of the instrument panel.

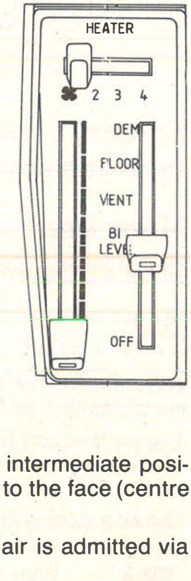
The air flow can be directed as required by tilting the vent inserts and swivelling the vanes.

The amount of air flowing through these vents is controlled by means of the regulating wheel located on each side of the vents.

To turn the air supply off rotate the regulating wheel down towards the 'OFF'' position until a stop is reached.

VENTILATION AND HEATER CONTROLS

The ventilation and heater controls consist of a multi speed fan switch, which regulates the rate at which air is delivered through the various outlets, and two sliding levers. The left hand lever controls the temperature of air in all modes and the right hand lever selects the particular mode required.



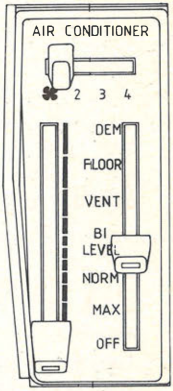
The mode control lever has five positions:

''DEM''	In this position the air flows mainly onto the windscreen through the vents on top of the instrument panel. A small amount of air also goes to the floor outlets.
''FLOOR''	In this position the main air flow is directed to the floor outlets with a small amount going to the screen vents.
''VENT''	This setting directs all the air to the two centre and four side vents. The air flow and direction can be adjusted at each vent.
''BI LEVEL''	This position directs air to the centre and side vents as well as to the floor vents. When using BI LEVEL with the temperature lever in an intermediate position, warm air will be directed to the feet and cooler air to the face (centre and side vents).
''OFF''	In this position the fan is switched off and no outside air is admitted via the ventilation system.
NOTE:	The fan automatically switches on to its lowest speed when the mode control lever is moved away from OFF position. Fan speed can then be increased by selecting a higher number. When driving in dusty conditions use 'VENT' or 'BI LEVEL' so that positive air pressure in the interior will reduce any dust entry that may occur. Windows should also be kept closed to assist in prevention of dust entry.

VENTILATION AND AIR CONDITIONER CONTROLS

(Where Fitted)

The ventilation and air conditioner controls consist of a multi speed fan switch, which regulates the rate at which air is delivered through the various outlets, and two sliding levers. The left hand lever controls the temperature of air in all modes and the right hand lever selects the particular mode required. The mode lever has seven positions:



"DEM"	In this position the air flows mainly onto the windscreen through vents on top of the instrument panel. A small amount of air goes to the floor outlets. The air is cooled to reduce humidity and then reheated to the setting required to demist the windscreen.
"FLOOR" (Economy Setting)	In this position, the main air flow is directed to the floor outlets with a small amount going to the demister vents. The air conditioner compressor does **not** operate in this mode.
"VENT" (Economy (Setting)	This setting directs all air to the centre and side vents. The air flow and direction can be adjusted at each vent. The air conditioner compressor does **not** operate in this mode.
"BI LEVEL"	This position directs the air both to the centre and side vents as well as to the floor outlets. When using BI LEVEL with the temperature lever in an intermediate position, warm air will be directed to the feet and cooler air to the face (centre and side vents).
"NORM"	This setting directs air through the centre and side vents. Used for most cooling needs on hot days. The air is cooled to reduce humidity and remove some dust and pollen etc. It can then be reheated if required to a temperature as determined by the temperature control lever.
"MAX"	Use for maximum cooling or quick cool down on very hot days. On this setting the cabin air is recirculated through the centre and side vents. No outside air is admitted through the inlet grille. The driver should return to NORMAL setting once interior temperature has reached an acceptable level.
"OFF"	On this setting the fan is switched off, no outside air is admitted and the air conditioner compressor does not operate.
NOTE:	The fan automatically switches on to its lowest speed when the mode lever is moved away from OFF position. Fan speed can then be increased by selecting a higher number.

Air Conditioner — Operating Notes:

1. Outside air is used in all modes except 'MAX' and 'OFF'. Do not operate in 'MAX' or 'OFF' for long periods as no outside air is admitted to the vehicle unless the windows are opened.
2. When driving in very dusty conditions use 'NORM' or 'BI LEVEL' mode. Either setting will pressurise the vehicle interior which will reduce any dust entry that may occur. Windows should also be kept closed to assist in prevention of dust entry.
3. Under normal conditions it is recommended that 'MAX' (recirculated air) setting be avoided if occupants are smoking as residues from the tobacco smoke adhere to the evaporator and air ducts and will produce stale smelling air.

4. **Automatic Transmission**
   If your vehicle is stopped for long periods in hot weather with the engine running and air conditioner operating, select 'NEUTRAL' or 'PARK'. This will increase your engine speed which in turn aids engine cooling and air conditioner performance.
5. To conserve fuel use the economy settings 'FLOOR', 'VENT' or 'OFF' according to your requirements. Use the 'FLOOR' setting for heating in cold weather.

   The 'VENT' setting can be used in milder conditions when no cooling is needed. You should only use the 'OFF' setting when the windows are open.
6. The air conditioner operates most efficiently with all windows closed.

   However, it is recommended that to cool a very warm interior the windows should be opened slightly for the first few minutes of system operation. This allows the very hot air to escape.

   IMPORTANT:
7. The following procedure should be carried out regularly during those periods of the year (e.g. winter) when the air conditioning modes may not normally be utilised:

   Once every two weeks, with the engine running, switch the air conditioner on by selecting either DEM, BI LEVEL, NORM, or MAX mode. The unit should be run for at least 5-10 minutes.

   This procedure recirculates the oil within the compressor and lubricates compressor shaft seals. This will help to prevent the drying out of the seals with subsequent operating failure of the system.

AM/FM STEREO RADIO and CASSETTE PLAYER

To play a tape

- **On-Off Switch/Volume Control (1) ON-VOL**
  Turn the control to switch the unit ON.

  Further rotation will gradually increase volume.

  When power is on, the unit will be in radio reception mode and AM (13) or FM indicator (12) will illuminate.

  Inserting a cassette will automatically start the player and override radio reception.

- **Balance Control (2) BAL**
  Rotate to adjust for the desired stereo effect (left and right speakers).

- **TONE Control (3)**
  Rotate to adjust the tone to suit your listening preference.

- **Cassette Door (6)**
  Insert a cassette with tape opening to your right. The radio mode will then shut off automatically and the cassette will start.

  One of the program indicators (4) will light up to show direction of tape travel.

- **Manual Cassette Eject Button (5)**
  Depress the button to eject the cassette. Radio mode will resume.

  NOTE: The player is designed to release the pinch rollers from the cassette tape when power to the unit is turned OFF. The cassette will remain in position until it is manually ejected.

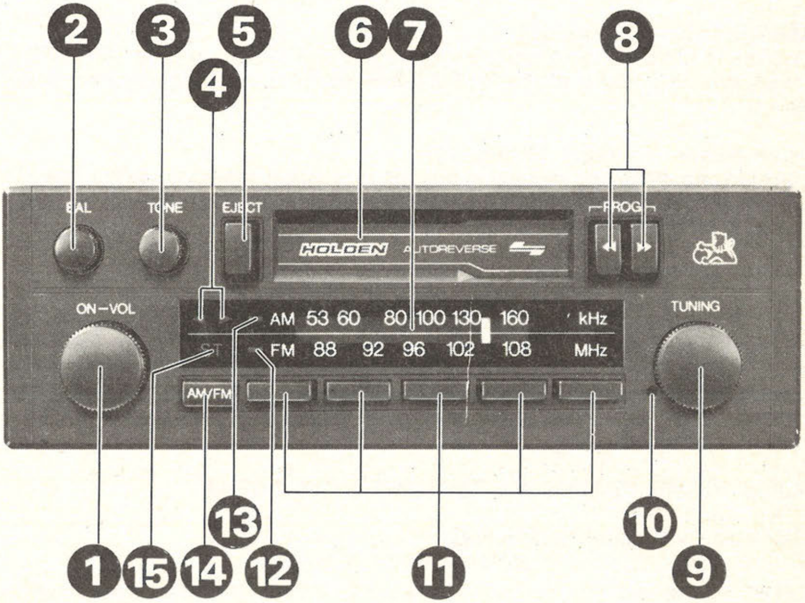
Do NOT try to eject the cassette immediately after insertion, as it will cause malfunction. Wait a few seconds.

CAUTION: ENSURE THAT CASSETTE ENTRY ON UNIT IS CLEAR BEFORE INSERTION OF CASSETTE.

■ **Program Selector (8) PROG**
Depress both buttons marked with ◄◄ ►► evenly to change the program, then the program indicator ◄ or ► (4) changes one after the other.

After the end of the cassette tape, the direction of the tape travel automatically reverses and then continues to play the other side.

■ **Fast Forward and Fast Rewind (8) ◄◄ ►►**
For fast forward operation, depress the button marked with the arrow corresponding to the direction by the illuminated arrow of one of the program indicators (4) until it locks.


2
3
5
4
6
7
8
BAL
TONE
EJECT
PROG
HOLDEN AUTOREVERSE
ON-VOL
AM 53 60 80 100 130 160 kHz
ST
FM 88 92 96 102 108 MHz
TUNING
AM/FM
13
10
1
15
14
12
11
9

1. Power On-Off Switch/Volume Control
2. Balance Control
3. Tone Control
4. Program Indicators
5. Manual Cassette Eject Button
6. Cassette Door
7. Dial Pointer
8. Fast Forward/Fast Rewind (FF/FR) Buttons
9. Tuning Knob
10. Antenna Trimmer
11. Push Button — Preset Tuning
12. FM Indicator
13. AM Indicator
14. AM/FM Waveband Selector
15. FM Stereo (ST) Indicator

For fast rewind, use the button marked with the arrow indicating the direction opposite to the illuminated arrow of the program indicator.

To release fast forward or fast rewind mode, depress the protrusive button. Depressing both buttons will change the direction of tape travel (Program change).

If one of the buttons is kept depressed until tape is fully wound up to the end of tape, the tape will automatically start playing after the direction of tape travel and the program is changed automatically.

To listen to radio

- **On/Off Switch/Volume Control (1)**
  Turn the knob clockwise. Radio will turn ON.

  Turn anti-clockwise to OFF. Or, eject the cassette by depressing the eject button (5), if the cassette is playing, AM (13) or FM indicator lamp (12) will light up.

- **AM/FM Waveband Selector (14)**
  To select waveband, AM or FM, depress the button for FM. Release for AM.
  AM indicator (13) or FM indicator (12) will illuminate.

- **Manual Tuning Control (9)**
  Rotate the knob left to right to tune in the desired station on either AM or FM. Tune it very precisely to the station to obtain best sound quality and minimum noise interference.

- **Push Button — Preset Tuning (11)**
  Pushing one of the corresponding buttons in recalls the desired station that has been already preset. Waveband Selector must be set at the position, AM or FM, corresponding to each preset station.

- **How to set Push Button**
  Each of the five push buttons may be set to any position on the dial. You may select any AM or FM station for each of the five push buttons. To set the push button, first pull out the push button until it unlocks, then tune in a station manually. Push the button firmly all the way in. That button will always return to the dial to that same position and thereby tunes that station each time that button is pushed in. Repeat the same procedure for each of the other four push buttons. You may change the setting as many times as you like.

- **Adjust Volume, Balance and Tone controls as desired.**

- **FM Auto Stereo/Mono Selection**
  The radio incorporates Auto-Mono switching circuit.

  FM Stereo indicator (15) will light up when an FM Stereo broadcast is received properly in good condition.

  If signals become too weak for proper stereo reception, the mono mode becomes automatically selected.

- **Antenna Trimmer (10)**
  The antenna trimmer must be adjusted at conclusion of installation to insure optimum reception of stations on the AM band. Fully extend antenna. Tune to a weak station in the area of 1300 — 1400 kHz. Adjust trimmer slightly by turning clockwise or anti-clockwise for maximum volume.

ELECTRONICALLY TUNED RADIO AND STEREO CASSETTE TAPE PLAYER (Type 1)

The Electronically Tuned (E.T.) radio is an AM-FM stereo signal seeking radio with digital display of channels and frequencies. The speaker system is two way (one front and one rear). Follow the operating instructions carefully to ensure correct operation of this advanced electronic equipment. (Refer to item 21 for how to switch radio on. Note: the cassette player will operate even with the power switch off.)

1. **Balance**
   To set the balance of sound between the front and rear speakers, turn this knob to left or right as required.

2. **Loudness (LD)**
   The loudness control automatically boosts low frequencies at relatively low volumes and becomes inoperative when the threshold volume is exceeded. Indicator (5) is illuminated when loudness is exercised.

3. **Rewind (REW)**
   The rewind control operates on tape only and when activated rewinds the tape towards the beginning. The tape will stop rewinding and commence playing normally when the tape is fully rewound or when the program button (6) is activated.

   This control will rewind the tape irrespective of the tape direction shown by indicators (4).

4. **Tape Direction Indicators**
   Indicate direction of tape travel. With the RH Travel Indicator "ON" the forward spool is filling and with the LH Travel Indicator "ON" the rear spool is filling.

5. **Control Indicators**
   These indicators show when the nominated control is engaged.

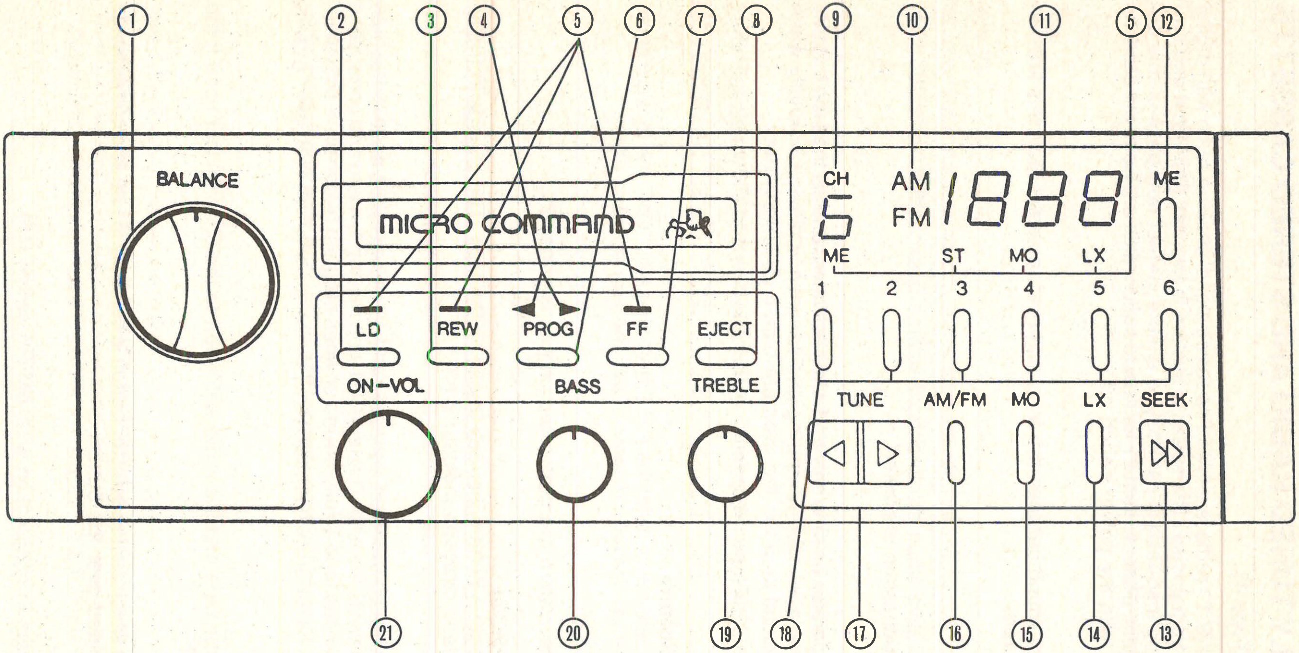
6. **Program Button (PROG)**
   Operation of the program button changes tracks on the tape. The change in tracks is indicated by the tape direction indicators (4).

7. **Fast Forward (FF)**
   The fast forward control operates on tape only and when activated, causes the tape to traverse rapidly towards the end. The tape will stop moving forward and commence playing normally when the tape is fully wound or when program button (6) is activated. This control will fast forward the tape irrespective of the tape direction shown by indicators (4).

8. **Eject**
   This control ejects the tape and the radio will revert to the channel last used if the power switch is "ON".

9. **Channel Indicator**
   This indicator shows which station selector button is currently in use and corresponds with the number printed over the button.

10. **AM/FM Indicators**
    The indicators operate in conjunction with AM/FM switch (16).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1. Balance Control
2. Loudness Button
3. Rewind Button
4. Tape Direction Indicators
5. Control Indicators
6. Program Button
7. Fast Forward Button
8. Eject Button
9. Channel Indicator
10. AM/FM Indicators
11. Digital Frequency Readout
12. Memory Button
13. Automatic Seek Tuning Button
14. Local/Distant Button
15. Stereo/Mono Lock
16. AM/FM Selector
17. Tuning Switch
18. Station Select Buttons
19. Treble Control
20. Bass Control
21. On-Off/Volume Control

11. **Digital Readout**
Indicates frequency of station selected.

12. **Memory Button (ME)**
When a station has been selected by the tuning control (17) or seek control (13) and it is desired to retain this station in memory, control (12) is depressed followed by depression of the desired station selection button (18). If this button already had another station in memory the previous station will now be lost. The station button must be depressed within 5 seconds, otherwise the memorising ability will be lost. Whilst the memorising facility is available the "ME" symbol (5) will be "ON".

IMPORTANT: If the battery is disconnected or the battery feed to the radio via the in-line fuse is interrupted, the radio memories will be retained for a minimum period of 7 days. For a substantially longer period than 7 days the preselected AM and FM stations may be lost and will need to be reset.

13. **Seek**
This control will automatically advance the tuned frequency until a strong station is encountered. This station will remain until the seek button is again depressed.

If too many stations are encountered, which could occur at night, the local/distant button (14) can be activated so that only the strongest stations are picked up.

14. **Local/Distant (LX)**
This control is normally on the Distant setting to obtain greatest signal strength but in some instances, it may be desirable to eliminate the weaker stations, particularly when the seek mode is being exercised at night (see 13). As it is normal to have this control in the Distant mode, indicator "LX" (5) is on to warn when the "Local" mode is engaged.

15. **Stereo/Mono Lock (MO)**
In some areas where FM signals tend to be weak the receiver contains circuitry to automatically shift from stereo to mono to strengthen the perceived incoming signal. As this can shift from stereo to mono and back to stereo quickly, a resultant noise can be apparent. To help overcome this noise the receiver can be locked in the mono mode via switch (15). The "MO" symbol (5) is "ON" when mono is operating.

16. **AM/FM**
The AM/FM switch is used to process AM or FM signals. Depending on which mode is called up the "AM" or "FM" indicator (10) will be "ON".

17. **Tune**
The tuning control pivots around a vertical fulcrum to give tuning in frequencies up or down, depending on whether the right hand or left hand side is depressed. In the AM mode the frequencies move in 9 kHz steps and FM in 100 kHz steps.

18. **Station Selection Buttons**
Each of these buttons can recall from memory either an AM or FM station depending on mode of the AM/FM switch, thus a total of 12 stations can be selected. Depending on which button is depressed the appropriate channel indicator (9) will be displayed.

19. **Treble (Tone Control)**
This control will either boost or cut high frequencies by rotating clockwise or anti-clockwise respectively.

20. **Bass (Tone Control)**
This control will either boost or cut low frequencies by rotating clockwise or anti-clockwise respectively.

21. **On-Off/Volume Control**
Before the radio can be turned on, the ignition key must be in either "ACC" or "ON" position. Push knob in to turn radio on. A second push will turn it off. Volume is controlled by rotating knob.

NOTE: Refer to end of this section for instructions on Antenna operation, cassette operation and care of tapes and tape player.

ELECTRONICALLY TUNED RADIO AND STEREO CASSETTE PLAYER (Type 2)

The Electronically Tuned (E.T.) radio is an AM-FM stereo signal seeking radio with digital display of channels and frequencies. The speaker system is four way (2 front and 2 rear). Follow the operating instructions carefully, to ensure correct operation of this advanced electronic equipment. (Refer item 21 for how to switch radio on. Note that the cassette player operates even with the power switch off.)

1. **Joystick Balance Control**
Single balance control for 4 speakers. The position of this control graphically illustrates the predominance of sound direction e.g. upper left position would give sound mostly from left-front speaker.

2. **Automatic Program Switch (APS)**
The APS Control is for cassette only and with APS "ON" momentary depression of fast forward (7) or rewind (3) buttons will cause the tape to quickly run to the next "gap" in the tape, after which the next programmed piece will commence in the normal manner. If the program thus selected is not the desired program, further depression of "FF" or "REW" buttons will cause quick traverse to the next "gap". To disable APS depress the control again. The indicator above the APS button shows the operational state i.e. APS is activated when the indicator is lit.

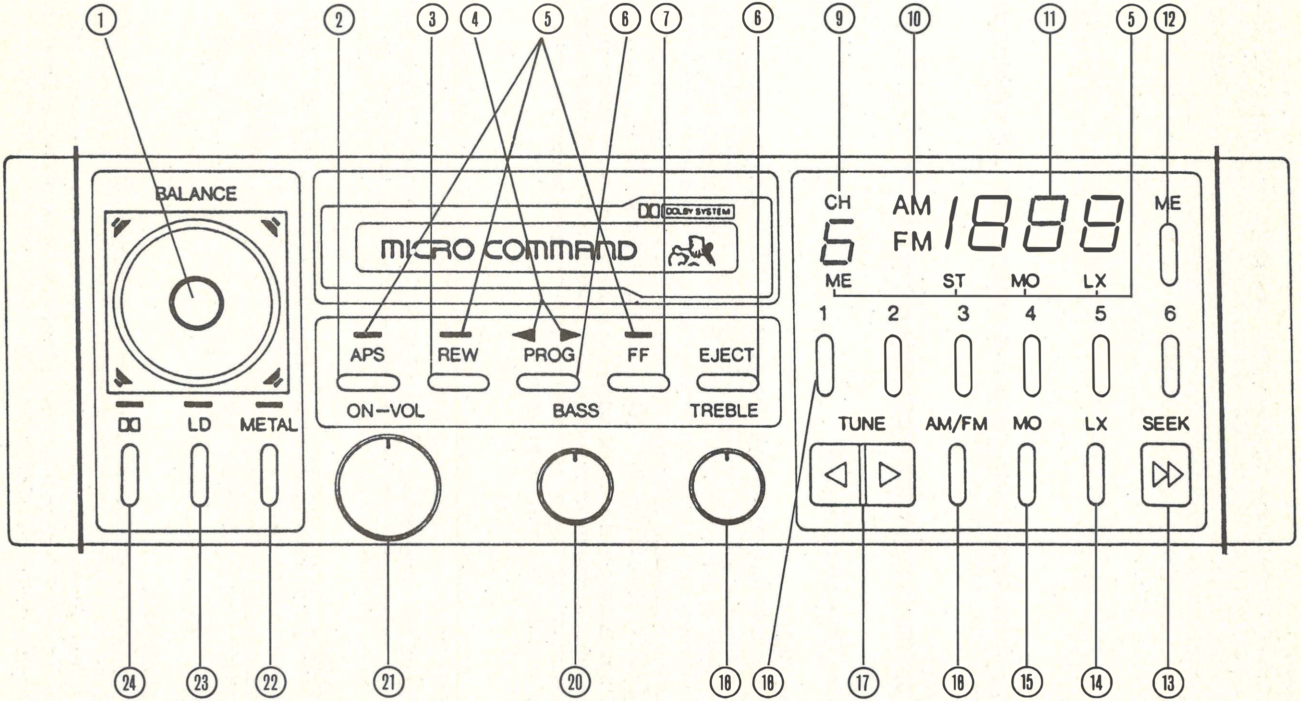
3. **Rewind (REW)**
The rewind control operates on tape only and when activated rewinds the tape towards the beginning. The tape will stop rewinding and commence playing normally when the tape is fully rewound or when the program button (6) is activated. (Refer to operation of APS — Item 2.)

This control will rewind the tape irrespective of the tape direction shown by indicators (4).

4. **Tape Direction Indicators**
Indicate direction of tape travel. With the RH Travel Indicator "ON" the forward spool is filling and with the LH Travel Indicator "ON" the rear spool is filling.

5. **Control Indicators**
These indicators show when the nominated control is engaged.

6. **Program Button (PROG)**
Operating the program button changes tracks on the tape. The change in tracks is indicated by the tape direction indicators (4).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1. Joystick Balance Control
2. Automatic Program Search
3. Rewind Button
4. Tape Direction Indicators
5. Control Indicators
6. Program Button
7. Fast Forward Button
8. Eject Button
9. Channel Indicator
10. AM/FM Indicators
11. Digital Frequency Readout
12. Memory Button
13. Automatic Seek Tuning
14. Local/Distant
15. Stereo/Mono Selector
16. AM/FM Selector
17. Tuning Button
18. Station Select Button
19. Treble Control
20. Bass Control
21. Volume Control/Radio On-Off
22. Metal Tape Compensator
23. Loudness Button
24. Dolby Button

7. **Fast Forward (FF)**
The fast forward control operates on tape only and when activated, causes the tape to traverse rapidly towards the end. The tape will stop moving forward and commence playing normally when the tape is fully wound or when program button (6) is activated. (Refer also operation of APS — Item 2.) This control will fast forward the tape irrespective of the tape direction shown by indicators (4).

8. **Eject**
This control ejects the tape and the radio will revert to the channel last used if the power switch is "ON".

9. **Channel Indicator**
This indicator shows which station selector button is currently in use and corresponds with the number printed over the button.

10. **AM/FM Indicators**
The indicators operate in conjunction with AM/FM switch (16).

11. **Digital Readout**
Indicates frequency of station selected.

12. **Memory Button (ME)**
When a station has been selected by the tuning control (17) or seek control (13) and it is desired to retain this station in memory, control (12) is depressed followed by depression of the desired station selection button (18). If this button already had another station button in memory the previous station will now be lost. The station button must be depressed within 5 seconds, otherwise the memorising ability will be lost. Whilst the memorising facility is available the "ME" symbol (5) will be "ON".

IMPORTANT: If the battery is disconnected or the battery feed to the radio via the in-line fuse is interrupted, the radio memories will be retained for a minimum period of 7 days. For a substantially longer period than 7 days, the preselected AM and FM stations may be lost and will need to be reset.

13. **Seek**
This control will automatically advance the tuned frequency until a strong station is encountered. This station will remain until the seek button is again depressed.

If too many stations are encountered, which could occur at night, the local/distant button (14) can be activated so that only the strongest stations are picked up.

14. **Local/Distant (LX)**
This control is normally on the Distant setting to obtain greater signal strength but in some instances, it may be desirable to eliminate the weaker stations, particularly when the seek mode is being exercised at night (see 13). As it is normal to have this control in the Distant mode, indicator "LX" (5) is on to warn when the "Local" mode is engaged.

15. **Stereo/Mono Lock (MO)**
In some areas where FM signals tend to be weak the receiver contains circuitry to automatically shift from stereo to mono to strengthen the perceived incoming signal. As this can shift from stereo to mono and back to stereo quickly, a resultant noise can be apparent. To help overcome this noise the receiver can be locked in the mono mode via switch (15). The "MO" symbol is "ON" when mono is operating.

16. **AM/FM**
The AM/FM switch is used to process AM or FM signals. Depending on which mode is called up the "AM" or "FM' indicator (10) will be "ON".

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The tuning control pivots around a vertical fulcrum to give tuning in frequencies up or down, depending on whether the right hand or left hand side is depressed. In the AM mode the frequencies move in 9 kHz steps and FM in 100 kHz steps.

18. **Station Selection Buttons**
Each of these buttons can recall from memory either an AM or FM station depending on mode of the AM/FM switch, thus a total of 12 stations can be selected. Depending on which button is depressed the appropriate channel indicator (9) will be displayed.

19. **Treble (Tone Control)**
The control will either boost or cut high frequencies by rotating clockwise or anti-clockwise respectively.

20. **Bass (Tone Control)**
This control will either boost or cut low frequencies by rotating clockwise or anti-clockwise respectively.

21. **On-Off/Volume Control**
Before the radio can be turned on, the ignition key must be in either the "ACC" or "ON" position.

Push knob in to turn the radio on. A second push will turn it off. Volume is altered by rotating knob. The power antenna will automatically extend when the radio is turned on and will retract when the radio is turned off.

22. **Metal Tape Compensation**
This control, when exercised, introduces compensation circuitry when metal tapes are used. Indicator (5) is illuminated when this control is used.

23. **Loudness (LD)**
The loudness control automatically boosts low frequencies at relatively low volumes and becomes inoperative when the threshold volume is exceeded. Indicator (5) is illuminated when loudness is exercised.

24. **Dolby**
Dolby noise reduction system is introduced with operation of this switch but Dolby should only be used with Dolby compensated tapes. Indicator (5) will be "ON" when this mode is used.

CASSETTE OPERATION (Types 1 and 2)

The cassette will operate even if the power switch is off. Insertion of the cassette is via a soft touch motor load mechanism to ensure correct cassette operation.

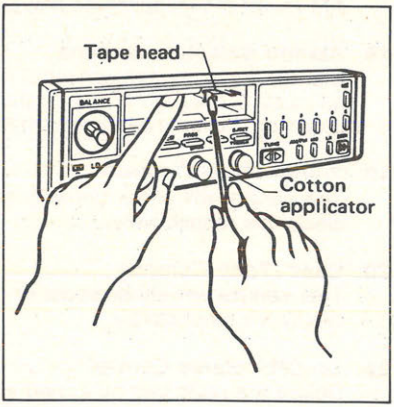
The motor load mechanism draws the cassette into the unit therefore minimal insertion by the operator is required until the motor load mechanism takes control.

IMPORTANT: It is recommended that you use good quality C-60 tapes in your player. Tapes of longer lengths than this are specifically not recommended.

Care of Cassette Tapes and Player

- Before inserting a cassette into the player, ensure that there is no excess slack in the tape. If necessary, insert a pencil into the reel hub and rotate it to take up the slack. A small amount of slack will not be detrimental to the tape's operation.
- On the completion of playing a tape, the cassette should be removed and stored in a suitable container.

  Do not leave cassettes on the seat or instrument panel for lengthy periods. Accummulation of dust on the cassette will ultimately cause damage to both tapes and player mechanism. Wipe any dust off cassettes before playing them.
- Do not expose cassette to direct sunlight. In hot weather it is recommended that you remove the cassette tapes from the vehicle when not in use.
- After repeated playing, residue from the tape and dust from surroundings will build up on the tape head. To assure trouble-free performance, it is recommended that once a month you clean the tape head using a cotton applicator (swab) moistened with alcohol.



ANTENNA

Standard Antenna

To extend this antenna from its fully closed position you must use the special key provided. Insert the key into the slots as shown and then use the key to withdraw the top section of the antenna. All sections can then be fully extended for maximum distance reception.

Power Antenna (where fitted)

If a power antenna is fitted, an instrument panel switch enables the antenna to be raised or lowered from the driver's position; for best reception all sections should be fully extended and then retracted as desired.

The power antenna is automatically raised to a position just below level with the vehicle roofline when the radio is first switched on. If the radio is already on when the ignition key is turned to the "IGN" or "ACC" positions the antenna will automatically raise.

The antenna automatically lowers to the fully retracted position when the radio control or ignition key is turned to the "OFF" position.

Maintenance of Antenna

Your radio antenna will give a long and trouble free life provided it is given simple and routine attention. This is particularly so with power operated antenna where bent or grimy rods may affect its smooth and efficient operation. At least once a month the antenna should be fully extended, well cleaned and the mast sections lubricated with light machine oil or petroleum jelly.

RADIO RECEPTION

Due to mobile operations Car Radios have performance limitations that may on occasions create the impression that your radio is malfunctioning. To assist you in understanding what you can expect from your new radio, we have set out below how reception may vary from time to time and under certain conditions.

• AM and FM

There are two basic types of radio broadcasts. The most widely used system is AM or Amplitude Modulation in which the amplitude of the signal is varied to produce the sound. In FM broadcasts, the frequency is varied to produce the sound.

• Electrical Disturbances

Radio waves may pick up electrical disturbances during transmission. They mainly affect the wave amplitude, and thus remain a part of the AM reception. They interfere very little with the frequency variations that carry the FM signal. As a result, AM reception can be disrupted by such things as lightning, power lines and neon signs.

Because FM transmission is based on frequency variations, interference that consists of amplitude variations can be filtered out, leaving the reception relatively clear, which is the major feature of FM radio.

• Signal Range

AM broadcast waves can curve or bend around obstructions, and thus tend to follow the curvature of the earth. The upper atmosphere (ionosphere) reflects AM signals back to earth, so stations can be heard at fairly long distances, especially after dark when the ionosphere layer rises.

FM broadcast waves do not bend, but rather reflect off some solid objects. They usually pass through the ionosphere and are not reflected back to earth. This gives them a straight line-of-sight transmission, which limits good FM reception to about 40 km.

• Peculiarities of FM Mobile Reception

A mobile FM receiver cannot be expected to continuously provide the quality of FM reception you may have experienced on your home receiver. Contrary to popular opinion FM broadcasts are not static free, and although your new radio has a built-in electronic interference absorption circuit, some static will be evident from time to time. There are also two phenomena peculiar to very high frequency mobile reception.

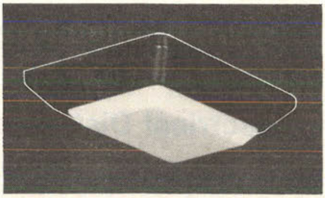
1. Flutter — As FM signals reflect off solid objects, it is possible to pass through areas of "Shadow" caused by tall buildings or hilly terrain, which effectively block out the signal. As the vehicle passes in and out of shadow areas, the level of signal will vary at a rapid rate creating a flutter type of interference to the signal.
2. Distortion — Distortion may occur when the direct signal from the transmitter and a reflected signal reach the aerial at the same time and either cancel or aid each other. This results in intermittent distortion of the signal whilst moving or constant distortion when stationary, such as at traffic lights or when parked. Should this distortion occur while stationary, moving the vehicle approximately one or two metres would on most occasions correct the problem.

SECTION 1F

OTHER CONTROLS AND FEATURES

Some of these features are standard on certain models and may be available as options on other models.

COURTESY LIGHT

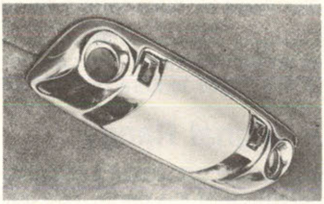


The interior roof courtesy light will automatically switch on when any door is opened.

To operate the courtesy light when the doors are closed pull the light switch knob on the dash panel. Push it back in to turn light off.

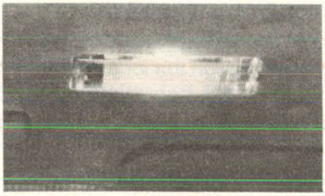
COURTESY/READING LIGHT

(where fitted)



The courtesy light will automatically switch on when opening any door. To operate the courtesy light when all doors are closed pull the main light switch knob on the dash panel. Push it back in to turn light off. The spot reading lamps mounted on either side of the centre courtesy light are activated by individual switches on each spot lamp.

REAR READING LIGHTS (where fitted)



The rear seat reading lights are mounted on each side next to the grip handles and are activated by individual switches mounted on each light.

GLOVE COMPARTMENT LIGHT

The light in the glove compartment comes on automatically whenever the glove compartment lid is opened.

BACK-UP LIGHTS

The two back-up lights provide general illumination behind the vehicle when the transmission shift lever is placed in reverse and ignition is turned on. They provide a visible signal to other drivers and pedestrians that the vehicle is operating or about to be operated in reverse gear.

LUGGAGE COMPARTMENT LIGHT

The luggage compartment light will come on when the lid is opened independent of exterior lights.

ENGINE COMPARTMENT LIGHT (where fitted)

This light is provided to illuminate the engine compartment. The light will operate when the engine hood is opened, provided the park or headlights are on.

"LIMITED SLIP" DIFFERENTIAL

Where this differential is fitted, it can be identified by a metal tag retained by the axle filler plug. The label calls attention to the need for special oil in this type of axle which must comply with the GM Specification listed in Lubricant Chart in Section 7 of this manual.

Use of unsuitable oil could result in noisy operation and/or excessive wear.

The "Limited Slip" Differential directs the major driving force to the rear wheel having the greater amount of traction, but it will not interfere with the normal differential action.

When the rear wheels are under extremely unbalanced tractive conditions (such as when one wheel is on a dry road surface and the other is on ice or mud) wheel spin can occur if over-acceleration is attempted. This condition may also be experienced if the driver over-accelerates on a wet road where a sharp bend must be negotiated. It is important that there be no excessive rear tyre differences. One indication of this condition is swerving on acceleration. If this is encountered, check the rear wheels for different tyre size, air pressures or excessively different wear and tread patterns.

CAUTION: Never run the engine with a gear engaged and one wheel raised if the vehicle is fitted with a "Limited Slip" differential. The driving force directed to the wheel on the ground will cause the vehicle to move.

SUPERLIFT SHOCK ABSORBERS

These allow direct control of vehicle level, so that when a vehicle is loaded or towing a caravan or trailer, the loaded height can be readjusted to give improved ride and handling and ground clearance in rough terrain. Also, they maintain a better headlamp level when high beam is used.

Superlift shock absorbers use compressed air and can be inflated or deflated through an air valve, similar to any standard tyre.

Air Pressure Valve Location

Inside the luggage compartment on the right side to the upper rear of the wheel housing on sedans. On wagons, on the left side of the rear door opening in the load compartment.

Air Pressure Recommendations

1. Never allow the pressure to fall below 70 kPa as this will result in damage to the shock absorbers.

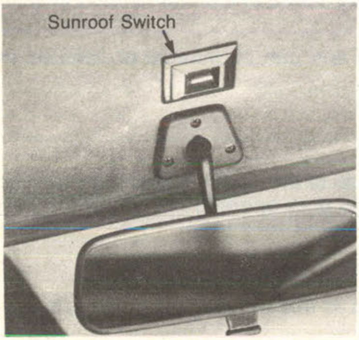
2. Maximum permissible pressure when vehicle is fully loaded is 620 kPa.
3. Maximum permissible pressure when the vehicle is unloaded is 210 kPa.
4. The shock absorbers should be inflated when the vehicle is standing on a level surface and only until:
   (a) The vehicle appears to be level, or
   (b) Maximum permissible pressure is reached, whichever is reached first.
   (c) Satisfactory ride characteristics will be obtained based on your experience with the system but the above limits must not be exceeded.

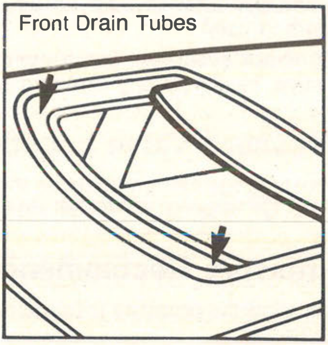
SUNROOF

Operation: Your Sunroof is an electronically operated option that permits opening of a sliding glass roof panel to admit sunshine and outside air into the passenger compartment. The Sunroof is operated by the toggle switch located on the forward centre area of the headliner. The ignition switch must be in the ON position to operate the sunroof panel. TO OPEN — Press the switch towards the rear of the car. TO CLOSE — Press the switch towards the front of the car. The Sunroof can be left partially open by releasing the control switch at any position in either direction of travel.

Sunshade Operation: The Sunshade is a sliding panel that permits the closing of the headliner-opening, when the Sunroof is closed. Using the handle mounted on the Sunshade, the panel is moved manually by sliding it forward or rearward on its track to the desired position. The Sunshade's travel is limited by the glass panel position. The Sunshade is automatically opened by the roof panel when the Sunroof is opened. The Sunshade is held in the full open position by an internal catch and can be closed manually after the roof panel is closed.

Rear Vent Feature: The Rear Vent Feature enables the rear of the roof panel to be raised permitting outside air to flow through the passenger compartment more freely. The switch that operates the Sunroof is also used to vent the roof panel. TO VENT — Press the control switch forwards. The rear of the panel then moves upward to the vented position. TO CLOSE — Press the control switch rearwards. The rear of the roof panel will move downward and seal tightly in the opening. A two stage switch system allows the operator to move the panel from the vented position to the closed position and then retract it to an open position. This is done by pressing the control switch rearwards until the panel goes from the VENT position to the CLOSED position. Releasing the switch and then pressing it again will cause the panel to open. When closing the Sunroof from either direction, the operator should release the control switch when the roof panel is flush and sealed. The Sunshade should be moved rearward when the Sunroof is in the vented position.





Integrated Air Deflector: The Integrated Air Deflector decreases wind noise and buffeting by channelling airflow with a "spoiler" effect. The Air Deflector automatically raises when the roof panel is opened and automatically retracts when the roof panel is closed.

Maintenance: Periodically clean off any dirt that may have accumulated on the tracks. Lubricate slide tracks every 6 months with white grease. Use of other lubricants may result in malfunction of Sunroof mechanism.

Drain Tubes: During regular maintenance, check the two drain holes at the front corners of the Sunroof opening to be sure they are open and the drain tubes are not plugged. If the drain tubes are plugged, they should be cleaned with compressed air. The rear drain tubes are located in the quarter panels. They can also be cleaned with compressed air.

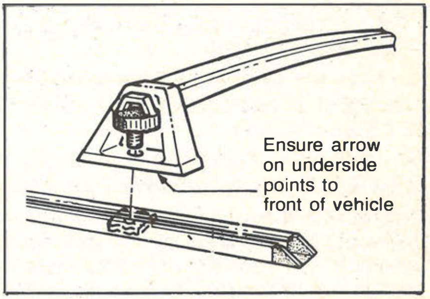
All major adjustments to the Sunroof should be performed by your GMH Dealer's Service Department.

Overload Resetting: The sunroof system has an overload circuit breaker which may render it inoperative. After a short delay, the circuit breaker will automatically reset and allow the system to function normally again provided the overload condition does not still exist.

ROOF LUGGAGE CARRIER

For important roof luggage carrier loading information refer to 'Loading Your Vehicle' in Section 2.

If your vehicle is fitted with the optional roof luggage carrier ensure that the cross bars are installed so that the arrow on the underside of the staunchion is pointing towards the front of the vehicle. If the cross bars are fitted in the reverse position, excessive wind noise may result.



DRIVING IN DUSTY CONDITIONS

When driving in dusty conditions it is necessary to pressurise the vehicle interior to avoid dust entry.

This can be done by setting the ventilation controls to 'VENT' or 'BI LEVEL' (on vehicles without air conditioning), or 'NORM' or 'BI LEVEL' (vehicles **with** air conditioning).

Windows should be kept closed in dusty conditions, as an open window will significantly reduce the air pressure in the vehicle interior and, at higher speeds, may cause a 'vacuuming' effect which will tend to pull dust into the vehicle.

SECTION 2 STARTING, DRIVING AND TRAILER TOWING

EXHAUST GAS WARNING

(Carbon Monoxide Poisoning)

Exhaust gases contain carbon monoxide, a dangerous gas, which can cause unconsciousness and even death to both humans and animals.

You could inhale the gases if the exhaust system on your vehicle is faulty.

To protect against exhaust gas entry into the interior of the vehicle we recommend that the exhaust system and body be thoroughly inspected:

— each time the vehicle is serviced;
— whenever a change is noticed in the sound of the exhaust system or
— whenever the exhaust system, underbody or rear of the vehicle is damaged.

Take the vehicle to your GMH dealer if you think your vehicle needs inspecting for any of the above reasons.

DO NOT SIT IN A PARKED VEHICLE FOR ANY EXTENDED PERIOD OF TIME WITH THE ENGINE RUNNING AND DON'T LEAVE THE CHILDREN OR YOUR PETS IN THE VEHICLE EITHER.

DO NOT RUN THE ENGINE IN AN ENCLOSED AREA SUCH AS THE GARAGE, ANY LONGER THAN IS NEEDED TO MOVE THE VEHICLE.

Driving with the luggage compartment lid or wagon tailgate open is not recommended. If you must travel with the luggage compartment lid or wagon tailgate open, close all windows, fully open the ventilation system, turn ventilation fan control to maximum setting and do not exceed 50 km/h unless necessary.

NEW CAR 'RUNNING-IN' PERIOD

These days, there's no need to follow a formal running-in schedule. However, by observing a few simple precautions during the first few hundred kilometres of driving you will add greatly to your vehicle's future performance and economy.

For the first 500 kilometres, don't exceeed 80 km/h. Up to 1,500 kilometres avoid driving at any one speed — either slow or fast — for any length of time. Include some higher speeds during this period. Always drive at moderate speed until the engine has completely warmed up.

For the first 500 kilometres heavy braking should be avoided, except in an emergency, since brake misuse during this period could impair future braking efficiency.

FUEL REQUIREMENTS

Your engine is designed to operate on good quality clean premium grade (SUPER) fuel of 97 octane rating. (Research Octane Number.)

The use of a fuel with an octane rating lower than that stated above can cause Detonation (a metallic rapping noise generated during the combustion process). If Detonation persists, consult an authorised GMH Dealer and obtain his advice. Continued operation of an engine which exhibits symptoms of Detonation may result in damage for which General Motors-Holden's Limited is not responsible.

SAFETY CHECKLIST

Following these simple steps before driving your new vehicle will help make your motoring safer:

Before Entering The Car

1. Check that windows, mirrors and lights are clean.
2. Check tyre inflation.
3. If you intend to reverse, check that the area behind you is clear.

Before Driving Off

1. Be sure that all doors are secured.
2. Position your seat for comfortable driving.
3. Adjust all rear vision mirrors.
4. FASTEN SEAT BELTS.
5. Check that the warning indicators light up when you turn the key to start the engine. (Refer this section for correct Starting Procedure.)
6. Check all gauges (including the fuel gauge).

STARTING THE ENGINE (All Except E.F.I.)

1. Apply the parking brake firmly and release only after you have started up and are ready to drive off.
2. **Manual Transmission**
   Depress the clutch pedal and shift the gear lever to Neutral position.

   Automatic Transmission
   Move the shift lever to 'P' (Park) or 'N' (Neutral) position. The engine will not start if it is in any other position.
3. Start the engine as outlined below.

Cold Engine

Your Commodore engine has an automatic choke system.

Before starting a cold engine, press the accelerator pedal slowly to the floor once and then completely release it. This action sets the choke system for starting. Turn the ignition key to the START position until the engine is started. If the engine fails to start within a few seconds, turn the key to the OFF position then depress and release the accelerator pedal before turning the ignition key to the START position again. Release the key when the engine is started. If the vehicle has been standing for several days, it may be necessary to repeat this procedure a few times until the engine starts. After the engine has started, allow it to run at fast idle for at least 10 seconds before engaging gears. Do not KICK DOWN, i.e. do not depress the accelerator pedal in an attempt to lower the engine idle speed. While the engine is running, the automatic choke gradually moves to the off position as the engine reaches normal operating temperature.

In temperatures below 0°C, let the engine run at fast idle in NEUTRAL for about one minute. Without touching the accelerator pedal, put the automatic transmission into DRIVE and wait for a few seconds for the engine to steady itself before releasing the brake to drive away.

Warm Engine

When your engine is warm, the choke system operates only briefly — if at all. To start — press the accelerator halfway to the floor and hold it in this position, then turn the key to START.

Idle the engine in Neutral for a short period before driving off.

Flooded Engine

Pumping the accelerator pedal and/or cranking the engine for a lengthy period without it starting could result in there being too much fuel in the engine.

If this occurs, press the accelerator down to the floor and hold it there while holding the key in the START position. When the engine starts, allow the accelerator pedal to come up slowly.

4. Apply the regular brakes and shift into the proper gear. Release the parking brake and drive off in the normal manner.

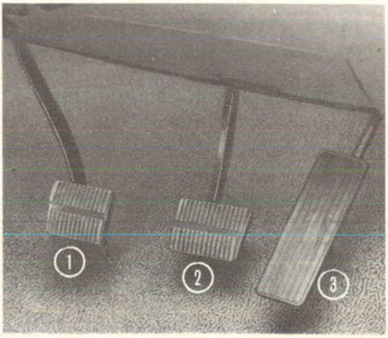
STARTING ELECTRONIC FUEL INJECTION ENGINE

1. Apply the parking brake firmly and release only after you have started the engine and are ready to drive off.
2. Move the transmission shift lever to 'P' (Park) or 'N' (Neutral) position. The engine will not start if it is in any other position.
3. For cold or hot starting the procedure is the same. Simply turn the key to START position and release when the engine starts. You do **not** have to depress the accelerator pedal prior to or during cranking.

NOTE: You should not subject the engine in your vehicle to high load conditions such as full throttle, acceleration or high speeds until it has warmed up to operating temperature.

FLOOR CONTROLS

1. **CLUTCH PEDAL** (Manual Transmission)
   This pedal is used to engage and disengage the clutch which enables you to select and change gears.
2. **BRAKE PEDAL**
   This pedal is used to control the vehicle's speed by operating the brake system.
3. **ACCELERATOR PEDAL**
   This pedal is used to regulate engine power and vehicle speed.



TRANSMISSION CONTROLS

4 Speed Manual Transmission

This system has four fully synchronised forward gears and a non-synchronised reverse gear.

The gear selection pattern is indicated on the knob of the gear lever.

First Gear — Low: This is synchronised and can be used at speeds up to 30 km/h. To avoid overloading the engine do not exceed this speed when accelerating. When decelerating do not select this gear unless the vehicle speed is less than 30 km/h.

Second Gear — Low Intermediate: Use this gear at speeds up to 50 km/h when driving in traffic. It is also useful on steep hills but do not select this gear unless vehicle speed is less than 50 km/h.

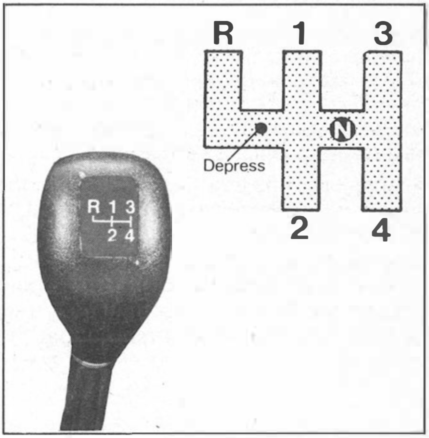
Third Gear — High Intermediate: Use this gear for acceleration and deceleration in the speed range 50-80 km/h.

Fourth Gear — High: This is the normal cruising gear at speeds down to 50 km/h. Below 50 km/h a lower gear should be selected for acceleration or deceleration.

Reverse Gear: This gear must never be engaged unless the vehicle is stationary. A slight pause between pushing the clutch in and moving into gear is desirable. The lever knob must be depressed downwards to pass into the R gate path.

NEUTRAL — For use when starting or running the engine while the vehicle is stationary. Never allow vehicle to travel while using neutral (except when being towed).

NOTE: To ensure minimum exhaust emissions and fuel consumption, the recommended gear shift speeds are: From 1st to 2nd, 20 km/h, from 2nd to 3rd, 35 km/h and from 3rd to 4th, 50 km/h.



Back-Up Lights

Provided the ignition is on, the back-up lights will operate whenever Reverse is selected.

5 Speed Manual Transmission

This system has five fully synchronised forward gears and a non-synchronised reverse gear.

The gear selection pattern is indicated on the knob of the gear lever. First, Second, Third, Fourth and Reverse gears operate as described under 4 Speed Manual Transmission.

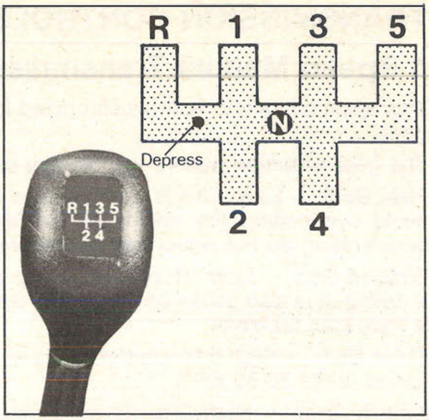
Fifth gear — Fifth gear is an overdrive gear which is used for highway–freeway cruising at speeds above 70 km/h. The overdrive feature allows the use of a lower engine speed for given road speed, than in fourth (direct) gear and fuel economy benefits are derived from correct use of the overdrive ratio. Use direct (fourth gear) when acceleration is required. Use lower gears for retardation.

Overdrive is an indirect gear, like 1st, 2nd and 3rd and some gear noise will be evident when vehicle is operated in overdrive.

Finally, do not drive your vehicle in overdrive at speeds less than 70 kph, as no fuel economy benefit is gained, and its use will adversely affect vehicle performance.

NOTE: The lever knob must be pulled against spring pressure in order to pass into the overdrive position (fifth gear).

NOTE: To ensure minimum exhaust emissions and fuel consumption, the recommended gear shift speeds are: From 1st to 2nd, 20 km/h, from 2nd to 3rd, 35 km/h, 3rd to 4th, 50 km/h, and 4th to 5th, 70 km/h.



AUTOMATIC TRANSMISSION

T-Bar Shift Lever

The engine will not start unless the selector is in either P or N. Select your gear — normally R or D — after the engine has started. By raising the release bar below the shift lever handle selection of gears from 1 to P or P to 1 and any intermediate positions can be made.

Shifting upwards from 1 to 2 to D to N does not require use of the release bar but it must be raised to select R or P.

Selecting positions from P requires raising the release to move out of PARK. Releasing the release bar before R will still allow selection through R to N to D. The release bar must be raised again to shift into the lower positions 2 or 1.

PARK
REVERSE
NEUTRAL
DRIVE
SECOND GEAR
LOW GEAR

What the positions are for:

P — Parking. Always use the parking brake as well. Your engine may be started in this position.

WARNING: Never shift transmission to Park position unless the car is completely stopped.

R — Reverse. Your car must be stationary before you select this position. Provided the ignition is on, the Back-Up Lights will operate whenever Reverse is selected.

N — Neutral. Your engine may be started in this position. Use Neutral to re-start a stalled engine while the car is still moving. Do not coast in Neutral, whether or not the engine is running. (Neutral is also used when towing the car. See "Towing" in "In Case of Emergency" Section 3 of this Manual.)

D — Drive. This is the gear range for normal driving. This position lets the transmission choose the appropriate gear for load and driving conditions. In this position the vehicle begins accelerating in first gear and shifts automatically into 2nd and 3rd gears.

As the vehicle speed decreases, or engine load increases, the transmission will automatically downshift to 2nd or 1st gear depending on vehicle speed and engine load.

"2" — Second gear range is used when it is desirable to prevent transmission changing into 3rd gear for going uphill, or for "engine braking" when going downhill. You can shift from "D" to "2" (and vice versa) under most driving conditions.

Do not use second gear ("2") for extended periods at speeds greater than:
4 cylinder models — 80 km/h
6 cylinder models — 95 km/h
8 cylinder models — 110 km/h

"1" — Low first gear range is used when it is desirable to prevent transmission changing into 2nd gear for going up steep hills; or, when maximum "engine braking" is needed for going down steep hills; or, when needed to pull through heavy sand or mud.

Do not use first gear ("1") at speeds greater than 65 km/h.

Downshifting in Drive ("D")

When you require extra power for overtaking or climbing steep grades, you can force the transmission to change to a lower gear (downshift) by pressing the accelerator pedal to the floor.

Automatic Driving Don'ts

- Don't rev the engine with the brakes on in either 1, 2, D or R. This will overheat the transmission.
- Don't rev the engine to hold the car on a slope. Use the brakes.
- Don't move into either R or P unless the vehicle has stopped.
- Don't ever coast the vehicle in N — this lessens your control and the engine braking power.

BRAKE SYSTEM

Your Commodore is fitted with a vacuum power-assisted brake system utilizing disc-type front brakes and, either drum type rear brakes or disc type rear brakes depending on which model you have.

Split Circuit Brake System

The brake system is a dual system; one operating the front wheels, the other operating the back wheels. Therefore, if there is ever a loss of hydraulic pressure in one system you can still brake the vehicle with the remaining system using some extra pedal effort. In association with the extra pedal effort the pedal would also travel further towards the floor.

The tandem design master cylinder incorporates a proportioning valve which regulates the amount of hydraulic pressure to the rear brakes. Under normal operation this reduces the pressure to the rear brakes during heavy stops to compensate for weight transfer.

In the event of a failure of the front system due to leakage, this valve supplies full pressure to the rear system.

Brake Warning Light

The brake system warning light is covered in the ''Instrument Panel'' section, Section 1E.

Power Brakes

- If power assist is lost because of a stalled engine or other reasons, the brakes can normally still be applied with power assist at least two times using reserve power.
- The system is designed to bring the car to a full stop on reserve power if the brake pedal is applied once and held down. However, the reserve power is partly used up each time the brake pedal is applied and released. Apply smooth and even pressure to the pedal. Do not pump the brakes when brake power assist has been lost, except when needed to maintain steering control.
- Without power assist, the car can still be stopped by pushing much harder on the brake pedal. However, the stopping distance may be longer, even though the brakes themselves remain fully operational.

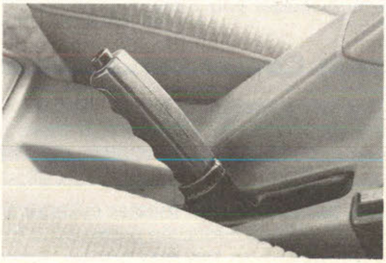
Self Adjusting Brakes

- The brakes on this vehicle are self-adjusting. They have been designed so that periodic brake adjustment is not required.
- The drum brakes adjust themselves each time the brake is applied.
- The disc brakes adjust themselves each time the brakes are used.
- If the brake pedal suddenly goes down further than normal, you should immediately see a GMH dealer for investigation of the problem.
- Also see your dealer if the parking brake is out of adjustment.

Parking Brake

The parking brake lever is mounted on the floor between the passenger's and the driver's seats.

- To Apply. Pull the lever straight up using the grip at the end of the lever. Do not press the release button.
- To Release. Pull the parking brake lever upwards while simultaneously pressing in the release button at the end of the lever with the thumb. After the ratchet system disengages, retain pressure on the button while lowering the lever.
- To help remind you, the park brake warning light is designed to stay on if the parking brake is not fully released and the ignition key is on.
- Never drive the car with the parking brake on as this may overheat the rear brakes, reducing their effectiveness and causing excessive wear or damage.



NOTICE: "Riding the brake" by resting your foot on the brake pedal when you do not intend to brake can cause overheated brakes. This can wear out the brake linings and pads faster and damage the brakes and waste fuel.

CAUTION: Driving through water deep enough to wet brake components may reduce braking effectiveness. As a result, the car will not slow down at the usual rate, and it may pull to the right or left. After checking to the rear for other vehicles, apply the brakes lightly to check whether this has happened. To dry them quickly, lightly apply the brakes. At the same time keep a safe forward speed, with plenty of clear space ahead, to the rear, and to the sides. Do this until the brakes return to normal. Always do this after driving through water to help reduce the possibility of personal injury.

HOW TO IMPROVE FUEL ECONOMY

The following information is to help you obtain the best fuel economy from your vehicle.

Vehicle Maintenance

Maintain your car in peak mechanical condition by having it serviced regularly in accordance with the GMH Maintenance Schedules. This will ensure items such as engine timing, spark plugs, points, air cleaner, engine idle speed etc. are maintained for best fuel economy.

Tyre Pressures

Keep the tyres at the correct pressures. Under-inflated tyres create extra rolling resistance which contributes to increased fuel consumption.

Wheel Alignment

Maintain correct front wheel alignment. Incorrect alignment makes the front wheels drag and increases fuel consumpion.

Warm Ups and Excessive Idling

- Avoid long warm ups. They are unnecessary and waste fuel. An engine takes approximately five minutes to reach its efficient operating temperature and it does this most effectively by driving on the road.
- You should also avoid excessive engine idling. If you have to wait for more than a couple of minutes turn off the engine to conserve fuel.

Accelerating, Driving and Braking

- Accelerate gently — avoid rapid starts, sudden bursts of speed and full throttle accelerations — they're certain fuel wasters.
- Drive the vehicle at steady speeds where possible (after run-in). It is desirable to achieve top gear operation, as soon as possible, but under no circumstances should you force the engine to labour in top gear.

- Slow down gradually with minimum use of the brakes. Sudden stops waste energy in the form of heat generated under braking. Energy in the form of fuel is needed to accelerate again.
- Avoid frequent short trips.

Excessive Speed

Drive at moderate speeds. Driving at 80 km/h instead of 110 km/h will use less fuel. Note that constant low speed driving (less than 60 km/h) will not give good fuel economy either.

Vehicle Loading & Aerodynamics

- Avoid carrying excess weight as the heavier the load the more fuel you will use.
- When loading your car's roof rack try to keep the load as low as possible thereby minimising wind drag.
- Overloading the rear suspension upsets the aerodynamics of your vehicle by raising the front of the car. The resultant drag increase contributes to increased fuel consumption.
- Avoid driving with the windows open, where possible, as this affects the aerodynamics of the vehicle, increasing drag and hence fuel consumption.

Air Conditioner Operation

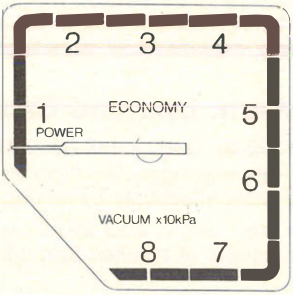
- Unnecessary use of the air conditioner in cool and moderate temperature conditions will increase fuel consumption. Use of the 'vent' setting in these conditions should provide adequate comfort and help to improve fuel economy.

Fuel Economy Indicator (where fitted)

This gauge has been fitted to your vehicle to help you save fuel. Observing the following recommendations in 'Cruising' and 'Accelerating or Climbing' will help you obtain optimum fuel economy.

Cruising

Remember that your carburettor is fitted with an accelerator pump for power when you put your foot down, and this squirts more petrol into the engine. To minimise fuel consumption you should minimise the pump's use when cruising. The vacuum gauge will tell you when you put your foot down while cruising by swinging to the left. Keeping the needle steady and at the highest possible reading will save fuel.



Accelerating or Climbing

The engine develops power most efficiently around 200 mm Hg, and in the power region becomes less efficient as more petrol is used to develop power at the expense of economy.

So when accelerating or climbing hills, holding the needle in the 15-25 kPa area on the economy gauge, with the transmission in the appropriate gear to avoid the engine labouring, will give lowest fuel consumption.

CARAVAN OR TRAILER TOWING

IMPORTANT: Your Commodore is designed primarily as a passenger vehicle so handling, durability and economy may be affected by towing a caravan or trailer. Before attempting any towing ensure that the correct equipment is fitted to your vehicle. Your GMH Dealer will help supply and install towing equipment to suit your requirements.

Never exceed the loadings given in Table I for the particular class of towing equipment fitted to your vehicle.

Read carefully all the CAUTIONS and Safe Towing Tips in this section.

Running-In Period

It is best to drive your new Commodore for 1,500 kilometres before towing a load. If you must tow before this do not exceed 80 km/h. The same applies if you have a new or reconditioned engine, transmission or rear axle.

Maintenance — Automatic Transmission

More frequent vehicle maintenance is required when using your vehicle to pull a trailer. Where an automatic transmission is fitted the transmission fluid will need to be changed every 12 months or 20,000 kilometres.

Trailer Mass

The total loaded trailer mass (kg) must NOT exceed the maximum mass specified for the class of towing equipment fitted to your vehicle. Refer to Table I ''Towing Equipment Classes''.

Your Commodore-trailer combination will handle more safely at higher speeds provided the trailer load is kept within the limits specified in Table I.

Tyres

When towing, your tyres should be inflated to the maximum recommended pressure. Refer to tyre placard in glovebox.

Electrical Connection

A special wiring harness is available from your GMH Dealer or accessories stockist. This is the only system recommended by GMH and use of any other may affect your warranty.

Vehicle and Towing Equipment Specifications

Satisfactory towing performance depends in part upon the specification of the vehicle and partly on the equipment which must be added so as to adapt the vehicle to the towing function. Both vehicle specification and towing equipment should be selected according to the range of loads and speeds of the intended towing operation.

The following information will assist you in determining the combinations of vehicle specification and towing equipment best suited to your purpose.

TABLE I — TOWING EQUIPMENT CLASSES

This table shows the class of towing equipment appropriate to various ranges of speeds and trailer loads. It will be seen that loads should be reduced for travel at higher speeds.

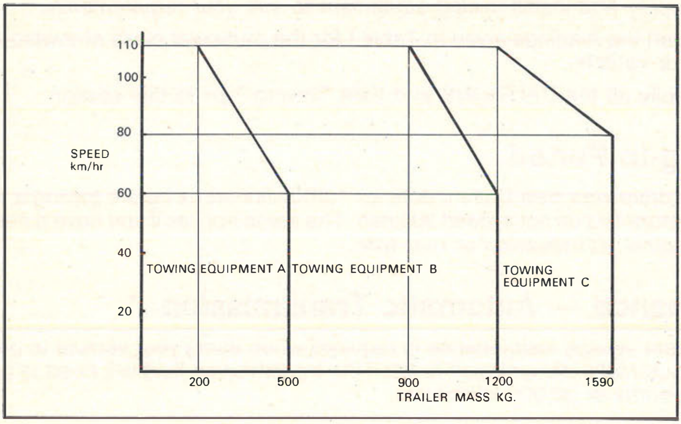


TABLE II — TOWING EQUIPMENT COMBINATIONS

This table specifies the combinations of towing equipment packages essential for each towing class.

CLASS	ESSENTIAL TOWING EQUIPMENT
A	GMP&A Trailer Wiring Harness Package GMP&A Tow Bar Package (Sedan or Wagon) as required.
B	GMP&A Trailer Wiring Harness Package GMP&A Tow Bar Package (Sedan or Wagon) as required. Load Equalizer Hitch (for towball loads in excess of 75 kg) Trailer Brakes
C	GMP&A Body Side Brace Package (Sedan) GMP&A Trailer Wiring Harness Package Trailer Brakes — Electric or Hydraulic Heavy Duty Tow Bar and Equalizer Hitch complying with SAE J784E or F Class 2.

NOTICE: GMH towing equipment is recommended where it is available. Where it is not available no recommendation is made as to the make of equipment which should be used. Neither General Motors-Holden's Limited nor General Motors-Holden's Sales Pty. Ltd. will accept liability for defects occurring in towing equipment not marketed by General Motors-Holden's Limited or for defects in the vehicle arising from the use of such equipment.

TABLE III — VEHICLE/TOWING EQUIPMENT COMBINATIONS

This table shows preferred combinations of vehicle specifications and class of towing equipment.

TOWING EQUIPMENT CLASS	VEHICLE SPECIFICATION	
	ENGINE	OTHER
A	4, 6 & 8 CYL	Automatic Transmission For high ambient temp. heavy duty cooling
B	2.8L 6 CYL	Automatic Transmission Heavy Duty Cooling
	3.3L 6 CYL	Automatic Transmission Heavy Duty Cooling
	8 CYL	Automatic Transmission Heavy Duty Cooling
C	3.3L 6 CYL	Automatic Transmission Heavy Duty Battery Heavy Duty Cooling Heavy Duty Alternator Outback Equipment
	8 CYL	Automatic Transmission Heavy Duty Cooling Heavy Duty Alternator Outback Equipment

If the trailer uses electrical current from the tow vehicle other than for lights, stop lights and turn signals, specify heavy duty alternator and for 4 and 6 cylinder vehicles, heavy duty battery.

Towbar Ball Load

The towbar ball load is measured as the vertical force required to support the trailer coupling at the towbar ball height before connecting the trailer to the car.

The recommended towbar ball load is 10% of the loaded trailer mass up to the maximum ball loads as specified in the following table:

Towing Equipment Class	Maximum Permissible Towbar Ball Load
A & B	120 kg
C	160 kg

NOTICE: For towball loads in excess of 75 kg a load equalizer hitch is required to maintain suitable vehicle suspension heights.

CAUTIONS:

1. **Do not use axle-mounted hitches. They can cause damage to the axle housing, wheel bearings, wheels or tyres.**
2. **Trailer brakes are required on trailers over 500 kg loaded mass except where State Laws may specify a lower limit. Some States specify that the maximum load to be towed must not exceed the vehicle mass.**

3. **It is permissible to tap into the rear brake system with a signal generating unit using not more than 0.21 cc of fluid displacement during the operation of the brakes. It must not be fitted to the front brake system.**
4. **The brakes on the trailer or caravan must be designed to cope with the braking requirements of that trailer or caravan under all towing conditions without adversely affecting the brakes on the towing vehicle.**
5. **WHENEVER A TOWBAR IS REMOVED BE CERTAIN TO HAVE ANY MOUNTING HOLES IN THE UNDERBODY PROPERLY SEALED TO PREVENT THE POSSIBLE ENTRY OF EXHAUST FUMES, DUST AND WATER.**

Safe Towing Tips

- Your vehicle will handle differently with a load behind. It's a good idea to make a couple of short distance trips with the caravan or trailer before you set off on the big one.
- Have your engine tuned before you leave.
- You should have an extended-arm mirror on **both** sides of the vehicle.
- Headlights may need re-aiming after the loaded caravan has been hitched up, particularly if a load equalizing hitch is not used.
- Use a lower gear, rather than your brakes, when going down steep hills.
- If your caravan or trailer runs off the road behind you, allow the left wheels of your car to run off as well. When it is safe to do so, carefully steer back on to the road. A sudden attempt to steer back could make you swerve dangerously.

LOADING YOUR VEHICLE

Overloading is a safety hazard and could also shorten the life of your vehicle or its parts. Your GMH Dealer can advise you about maximum loading limits for your particular vehicle.

Tyre Maximum Load Rating and Maximum Vehicle Loading

It must be clearly understood that the maximum load rating shown on the tyre placard in the glove compartment is not an actual load capacity that can be used for each wheel. While the tyre manufacturers rate the tyre for this load application at the maximum pressure shown on the placard, the vehicle manufacturer's suspension, ride and handling characteristics must be taken into account. Therefore, the maximum rear axle loading or the maximum load vehicle mass should not be exceeded. Refer to Vehicle Mass Chart on following page.

Towbar Loads

The load imposed on the towbar ball must be included in the maximum rear axle loading and the maximum loaded vehicle mass, (refer Vehicle Mass Chart) unless load equalising hitch is used which fully compensates for towbar load by restoring the towbar tongue height to the unhitched position.

Roof Rack Loads

No increase in maximum loaded vehicle mass is allowable where a roof rack is fitted. It must be understood that roof rack loads alter the handling characteristics of a vehicle due to a change in the centre of gravity. When carrying loads on the roof rack avoid abrupt swerving or sharp steering manoeuvres. The load should be evenly distributed. A load of no more than 68 kg is suggested as a reasonable limit.

Booster Springs and Superlift Shock Absorbers

The use of booster springs or superlift shockabsorbers DOES NOT increase the load capacity of the vehicle. The maximum loads shown in the chart below must NOT be exceeded if overloading of axle components and the consequent shortening of service life is to be avoided.

Superlift shock absorbers do allow adjustment of the vehicle's height, so that improved ride and handling and better ground clearance in rough terrain may be obtained when running heavily laden.

CAUTION: Do not drive the car with Superlift shock absorbers inflated when the car is unladen as vehicle handling is affected. (The car should be at normal trim level.)

VEHICLE MASS CHART

Model L4 — Four Cylinder Engine L6 — Six Cylinder Engine	(Estimated) Kerb Mass Kg	(Estimated) Maximum Rear Axle Loading Kg	(Estimated) Maximum Loaded Vehicle Mass Kg
Commodore SL Sedan (L6)	1220	896	1715
Commodore SL Wagon (L6)	1261	978	1784
Commodore Berlina Sedan (L6)	1267	943	1797
Commodore Berlina Wagon (L6)	1304	1000	1823
Calais (L6)	1348	963	1808
Commodore SL Sedan (L4)	1142	884	1611
Commodore SL Wagon (L4)	1187	959	1686
Commodore Berlina Sedan (Auto) (L4)	1200	903	1649
Commodore Berlina Wagon (L4)	1238	980	1730

NOTE: The kerb mass represents a standard unloaded vehicle without options but with a full tank of petrol. Where a V8 engine is fitted as an option 91 kg should be added to the kerb mass and the maximum loaded vehicle mass.

Front Axle Loading L6 maximum 845 kg
Front Axle Loading V8 maximum 902 kg

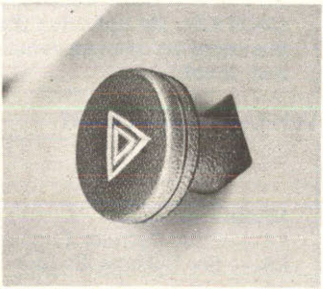
At all times the total of the front axle load and the rear axle load should not exceed the maximum loaded vehicle mass.

The recommended load carrying capacity of your vehicle is:
Sedan — one passenger for each seat belt provided, plus 68 kg luggage.
Wagon — one passenger for each seat belt provided, plus 91 kg luggage.

FOUR-WAY HAZARD WARNING FLASHER

Use the hazard warning flasher to warn other drivers any time your car becomes a traffic hazard, day or night. Avoid stopping on the roadway if possible.

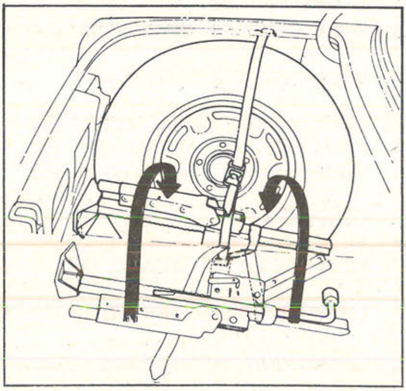
- Turn on the hazard warning flasher by pushing in the button located on the left side of the steering column. This makes all four turn signal lights flash continuously. The dash mounted turn signal indicator lights will also flash.
- The flasher will work with the ignition either off or on.
- To turn off the flasher, pull the button out.



SPARE WHEEL STORAGE — SEDAN

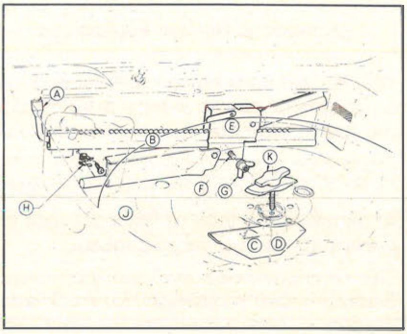
The spare wheel, jack and wheel nut wrench are stored in a vertical position on the left hand side of the luggage compartment.

The spare wheel is secured by a strap, the jack base rests on the rear of the spare wheel well. To release the spare wheel push buckle upwards.



SPARE WHEEL STORAGE — STATION WAGON

The spare wheel, jack and wheel nut wrench are stored below the floor panel in the rear luggage area. The spare wheel is held in position by a retainer plate and a hand nut. Access to the spare wheel is gained by lifting the carpet and then the floor panel.



To Remove

1. Roll back carpet and unlock the wheel storage hatch cover by twisting the locking ring.
2. Open the cover to full extent.
3. Unscrew the wheel retaining bolt.

4. Remove spare wheel.
5. Unscrew wing nut on the jack retaining stud and remove the jack and wheel nut wrench.

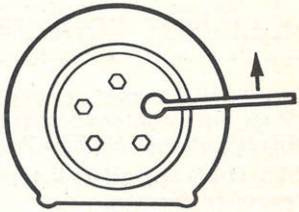
To Replace

1. Place wheel nut wrench 'A' into jack column 'B'.
2. Position jack base 'C' under wheel support bracket 'D'.
3. Slide ratchet mechanism 'E' along jack column 'B' so that the hole in the ratchet mechanism will locate with the stud 'F' protruding from the rear of the wheel well.
4. Position jack assembly and secure with wing nut 'G' and clip 'H'.
5. Replace wheel 'J' in wheel well and secure with wing bolt 'K'.
6. Close and lock hatch cover and replace carpet.

WHEEL CHANGING

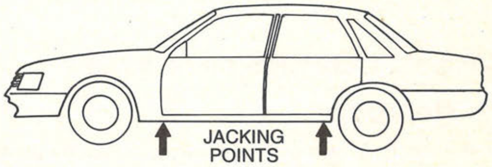
CAUTION: To help Avoid Personal Injury.
- **Carefully follow jacking instructions.**
- **Use jack only for lifting this vehicle when changing wheels.**
- **Never get beneath the vehicle when it is supported by the jack only.**
- **Do not start or run the engine while the vehicle is supported by the jack only.**
- **All passengers should be out of the vehicle when it is being jacked.**

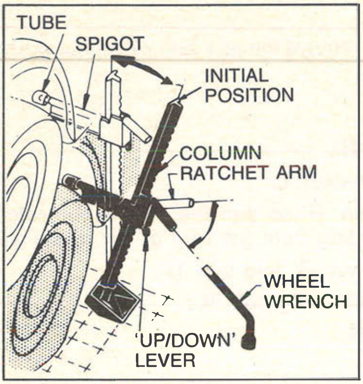
1. Park on level surface and set parking brake firmly.
2. Set automatic transmission in park (manual transmission in reverse) and remove ignition key.
3. Remove the tools and spare wheel (refer previous instructions).
4. Block the wheel diagonally opposite the jacking position.
5. Remove the wheel trim (refer Wheel Trim Instructions). Loosen, but do not remove, wheel nuts by turning wrench counter-clockwise.

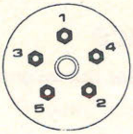


LOOSENING WHEEL NUTS

6. Place column in base, feed spigot into tube provided in vehicle body and position base as illustrated with the angled face on the ground directly below the sill of the vehicle.
7. Move 'up/down' lever to 'UP' position, insert wheel wrench into ratchet arm and with steady pumping action raise vehicle until tyre clears ground.







Wheel Nut Tightening Sequence

8. Remove the wheel nuts and avoid losing them or getting dirt in the threads. Remove the wheel and change it over with the spare.
9. Replace wheel centre cover (where fitted).
10. Tighten the wheel nuts finger tight and then partially tighten using the wrench.
11. Move 'up/down' lever to 'DOWN' position, then lower vehicle using steady pumping action. After completely lowering the vehicle, remove the jack.
12. Fully tighten wheel nuts with the wrench using the nut tightening sequence illustrated.
13. Replace the wheel trim and stow the tools and changed wheel according to the previous instructions.

WHEEL NUT TORQUE

CAUTION: As soon as possible after changing a wheel, you should have the wheel nuts tightened with a torque wrench to the specifications shown in 'Specifications' Section 7 of this Manual.

Wheel nuts should be tightened evenly to the correct torque in the numerical sequence shown.

Improperly tightened wheel nuts could eventually allow the wheel to come off while the car is moving, possibly causing loss of control, and/or personal injury or damage.

WHEEL COVERS (where fitted)

To Remove

Push the blade end of the wheel nut wrench between the wheel cover and the wheel and force it in for about half the length of the blade.

Moving round the wheel, lightly pry the cover off at several points by twisting the wrench away from the tyre.

To Replace

Position the cover so that the valve hole in the cover is directly over the valve. While pressing the cover firmly against the wheel at the lowest position, knock the cover onto the wheel with several light blows using the palm of the hand. Repeat this operation at several positions around the edge of the cover until a secure installation is obtained.

CAUTION: It may be necessary to protect the hand during this operation.

WHEEL CENTRE TRIM (Alloy Wheels)

To Remove

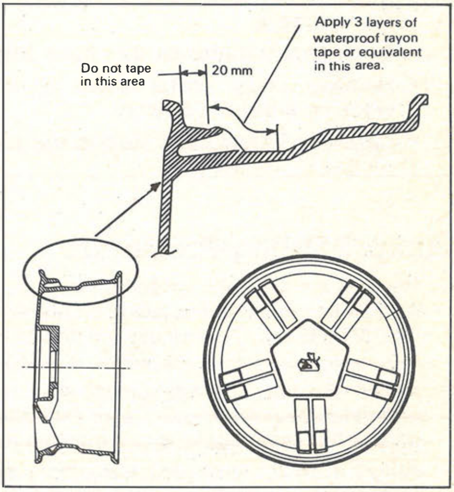
Insert the blade of the wheel nut wrench into the slot in the trim and gently lever off by moving the wrench towards the wheel face.

To Replace

Position the centre trim with at least 3 clips located in the wheel cavity and press firmly into position.

CAUTION: The alloy road wheel of the design illustrated below has slots cast into the rim section of the wheel to facilitate manufacture. Because of these slots **it is not recommended to fit the tyres with tubes.** If in an emergency tubes are to be fitted, it is recommended that the slots be covered with 3 layers of 50 mm wide waterproof rayon tape or equivalent to prevent chafing of the tube against the edge of the slots. Do not apply the tape within 20 mm of the rim flange as this is the tyre bead seating area. Refer to sketch below.

At the earliest opportunity, a new tubeless or properly repaired tyre should be fitted thereby eliminating the need for a tube.


Apply 3 layers of waterproof rayon tape or equivalent in this area.
Do not tape in this area
20 mm

EMERGENCY STARTING

Starting with Auxiliary (Booster) Battery

If your vehicle will not start due to a discharged battery, it can often be started by using energy from another battery — a procedure called "jump starting". This procedure is for use ONLY under the conditions listed below.

Departures from these conditions and procedures could result in: (1) serious personal injury (particularly to eyes) or property damage from such things as battery explosion, battery acid or electrical burns, or (2) damage to electronic components in either vehicle. If all the conditions cannot be met, or if you are uncertain about them, we strongly recommend for your safety and that of your vehicle that you leave the starting to a competent mechanic.

Conditions
The battery in the other vehicle (booster battery) must be of the same nominal voltage, 12 volts and must be negatively grounded. The nominal voltage and grounding of the other vehicle's battery may be determined by checking the specifications in its owner's manual. Use of a booster battery of a higher nominal voltage, or which is positively grounded may result in serious personal injury or property damage.

Also, never use a quick charger to start your engine.

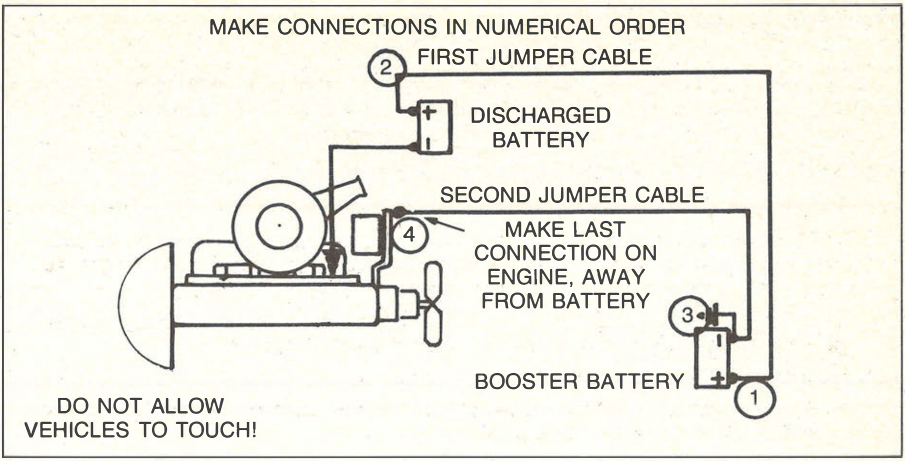
CAUTION: Batteries produce explosive gases, contain corrosive acids and supply levels of electrical current high enough to cause burns. Therefore, to lessen the chance of personal injury when working near a battery:

- **Do not expose the battery to open flames or sparks. Battery action generates hydrogen gas which is flammable and explosive.**
- **Do not smoke near a battery.**
- **Wear eye protection such as industrial safety glasses and avoid leaning over the battery whenever possible.**
- **Do not allow battery acid to contact eyes or skin. Flush any contacted area with water immediately. In case of eye contact you should get medical help. Battery acid will also damage paintwork and fabrics if not washed off immediately.**
- **Be sure any batteries that have filler caps are properly filled with fluid.**
- **Remove rings, metal watch bands and other metal jewellery before working around a battery.**
- **Carefully follow each step in the jump starting procedure.**

Jump Starting Procedure

1. Position the two vehicles so that they are **not** touching and apply the parking brakes. Automatic transmissions are to be placed in 'PARK' and manual transmissions placed into 'NEUTRAL'. Turn off ignition and all lights and accessories in both vehicles except the hazard flasher or any lights needed for the work area.
2. Attach one end of the first jumper cable to the positive terminal of the **booster battery** (identified by a red colour, + or P on the battery case, post or clamp) and the other end of the same cable to the positive terminal of the **discharged battery.**
3. Attach one end of the second jumper cable to the negative terminal (black colour, — or N) of the **booster battery,** and the other end to a solid, stationary, metallic point on the engine of the vehicle with the discharged battery **(do not connect directly to negative post of discharged battery).**

   When making all connections take care that the clamps from one cable do not inadvertently touch the clamps on the other cable. Also ensure that jumper cables are not on or near pulleys, fans or other points that will move when the engine is started.
4. Start the engine in the vehicle which has the good battery and run the engine at a moderate speed. Then start the engine in the vehicle that has the discharged battery.
5. When the engine starts, leave it running then remove the jumper cables by reversing the above installation sequence exactly. While removing each clamp, take care that it does not touch any other metal while the other end remains attached.


MAKE CONNECTIONS IN NUMERICAL ORDER
2
FIRST JUMPER CABLE
+
-
DISCHARGED BATTERY
SECOND JUMPER CABLE
4
MAKE LAST CONNECTION ON ENGINE, AWAY FROM BATTERY
3
-
BOOSTER BATTERY
+
1
DO NOT ALLOW VEHICLES TO TOUCH!

Push Starting

Manual Transmissions

CAUTION: NEVER tow the vehicle to start because the surge forward when the engine starts could cause a collision with the tow vehicle.

Should it ever be necessary to start the engine by pushing the vehicle follow this procedure:

1. Turn off all unnecessary electrical loads and turn ignition switch to 'ON'.
2. Check the choke or accelerator pedal setting as they apply to the Starting Procedure in Section 2 of this Manual.
3. Depress the clutch pedal and place the transmission shift lever in high gear.
4. When the vehicle speed reaches approximately 15 km/h slowly release the clutch pedal. When the engine starts, drive away from the pushing vehicle.

NOTICE: Bumpers and other parts contacted by the pushing vehicle should be protected from damage during pushing.

Automatic Transmission

If for any reason the starter motor is inoperative, it is not possible with an automatic transmission to push start the vehicle.

If the fault is a flat battery the engine can be started with the aid of a booster battery.

ENGINE OVERHEATING

CAUTION: If the engine should overheat, as indicated by the Temperature Gauge reading and/or the alpha warning display reads ENGINE HOT (electronic instruments only) or if you have any other reason to suspect there is a serious overheat condition immediate action is required as outlined in the following section. Continued operation of the engine EVEN FOR A SHORT TIME could result in a fire and the possibility of personal injury and/or severe vehicle damage.

If you can see or hear steam escaping from the engine compartment or have other reason to suspect there is an overheat condition, stop the vehicle, as soon as it is safe to do so, and turn off the engine.

Do not open the engine hood if you can see or hear steam or coolant escaping from the engine compartment. Wait until no steam or coolant can be seen or heard before opening the hood.

While the engine is cooling, check your fan belt for slipping or breakage and check that the fan turns when the engine is cranked.

Look for leaks at the radiator hoses and connections, heater hoses and connections, radiator and water pump.

Take care when checking all these components as they will probably still be hot.

If you find major leaks or spot other problems that may have caused the engine to overheat, do not run the engine until these problems have been corrected.

If you do not find a leak or other problem then you should check the level of coolant in the radiator.

CAUTION: Do not remove the radiator cap if the engine and radiator are still hot. Scalding fluid and steam can be blown out under pressure which is likely to cause serious personal injury.

When the engine has cooled sufficiently, remove the radiator cap as follows:

Cover the radiator cap with a thick cloth and turn it slowly anti-clockwise until it reaches a "stop". Do not press down while turning the cap.

Wait until any remaining pressure (indicated by a hissing sound) is relieved, then press down on the cap and continue turning it anti-clockwise until it can be removed. Check the coolant level and add water if necessary with the engine idling. Top up recovery reservoir if required. After taking one or more of the actions above and once the Temperature Gauge no longer signals an overheat condition you can resume driving at a reduced speed. Return to normal driving after ten minutes if the Temperature Gauge does not again show an overheat condition.

If overheating occurs again you should have the vehicle attended to, as soon as possible, by a qualified mechanic.

NOTE: Your vehicle's engine may temporarily operate at high temperature during more demanding operating conditions especially on very hot days. These conditions include:—

- climbing a long hill
- stopping immediately after high speed driving

- idling for long periods in traffic or
- towing a heavily laden trailer or caravan.

You should avoid operating your vehicle for prolonged periods in any of the above circumstances if the Temperature Gauge indicates high engine coolant temperature.

Refer to description of the ''Engine Cooling System'' in Section 6A, which gives maintenance instructions to help protect your cooling system from overheating.

TOWING A DISABLED VEHICLE

Proper lifting or towing equipment is necessary when lifting or towing the vehicle to prevent damage to it during any towing operation. State and Local laws must be followed. In an emergency, your vehicle may be towed on all four wheels in the following manner:

- Fit the towing equipment to one of the towing eyes on the front subframe below the front bumper. Do not attach to bumpers or brackets.
- Place transmission in neutral position and release the handbrake.
- Switch the ignition key to ''ON'' position (this will free the steering lock). Then turn the key anticlockwise past ''LOCK'' to ''ACC''. This will allow the correct operation of windshield wipers and turn signals.
- For the sake of safety and to prevent damage to the vehicle it is advisable to avoid jerky movements and to drive slowly during towing operations.
- Remember that power assist for brakes and power steering (where fitted) will not be available when the engine is off.
- To prevent the entry of exhaust fumes from the towing vehicle into the passenger compartment of your vehicle, close the windows and stop entry of air by moving heating and ventilation controls to OFF position.
- Automatic vehicles must not be towed for more than 55 km or at over 55 km/h unless the propeller shaft is removed.
- Vehicles with damaged transmission must not be towed unless the propeller shaft has been removed.
- Only the driver should be in a towed vehicle.

SECTION 4 CUSTOMER ASSISTANCE AND GMH DEALERS

We want you to be happy with your new vehicle and with the people you deal with while you have the vehicle.

Normally, any problems which may arise with the sales transaction, operation or servicing of your vehicle will be handled by your Dealer's Sales and Service department.

We realise however that, with the best intentions, misunderstandings do occur sometimes.

If you have a problem that has not been settled to your satisfaction here's what to do:

Step 1:

Discuss the problem with one of the Dealer's management people. If you feel you haven't got satisfaction from the Sales Manager or Service Manager — go to the General Manager or the Dealer himself.

Step 2:

If it seems that no-one at the dealership can help fully, write to the GMH Zone Customer Assistance Manager in your State outlining your problem and including your name, address and telephone number; the vehicle model and vehicle identification number (V.I.N.); date of purchase, current odometer reading and the Dealer's name and address. Some of this information will be on your Vehicle Identification Certificate (inside the front cover).

Step 3:

By now you should have satisfaction. If not, you can write to the GMH National Customer Assistance Manager, GMH Sales Pty Ltd, P.O. Box 548D, Melbourne 3001.

GMH ZONES
CUSTOMER ASSISTANCE MANAGERS

QUEENSLAND
General Motors-Holden's Sales Pty. Ltd.,
Box 728, G.P.O.,
BRISBANE, QLD. 4001.

NEW SOUTH WALES AND AUSTRALIAN CAPITAL TERRITORY
General Motors-Holden's Sales Pty. Ltd.,
Box 481, P.O.,
EDGECLIFF, N.S.W 2027.

VICTORIA AND TASMANIA
General Motors-Holden's Sales Pty. Ltd.,
Victorian Zone Service Division,
Box 548D, G.P.O.,
MELBOURNE 3001.

SOUTH AUSTRALIA AND NORTHERN TERRITORY
General Motors-Holden's Sales Pty. Ltd.,
Box 221, P.O.,
ELIZABETH, S.A. 5112.

WESTERN AUSTRALIA
General Motors-Holden's Sales Pty. Ltd.,
P.O. Box 426,
WEST PERTH, W.A. 6005.

AUTHORISED GMH DEALERS

(Note: Dealership names and locations listed are effective at the time of printing. These may change from time to time without notice.)

NEW SOUTH WALES — Metropolitan Dealers

ARNCLIFFE
Suttons Motors (Arncliffe) Pty. Ltd.,
93 Princes Highway

ASHFIELD
Muirs Motors (Ashfield) Pty. Ltd.,
252 Parramatta Road

BALGOWLAH
Ross Hannon Holden
164 Condamine Street

BAULKHAM HILLS
Tony Packard Holden
Cnr. Victoria Avenue & Windsor Road

BELMONT
Young & Green (Belmont) Pty. Ltd.,
444 Pacific Highway

BLACKTOWN
West City Motors
120-128 Sunnyholt Road

CABRAMATTA
Ron Hodgson Holden
266 Hume Highway

CAMPBELLTOWN
Paul Wakeling Holden
63 Blaxland Road

CARDIFF
Brian Kelly Holden
35-39 Macquarie Road

CHATSWOOD
Sundell Holden
815-843 Pacific Highway

CHULLORA
Suttons Motors (Chullora) Pty. Ltd.,
Cnr. Hume Highway & Waterloo Road

CROW'S NEST
J. N. Caldwell (Holdings) Pty. Ltd.,
1 Alexander Street

DEE WHY
Barry Smith Holden
Cnr. May and Mooramba Roads

GOSFORD
Noble Motors
Pacific Highway

HOMEBUSH
Suttons Motors (Homebush)
112 Parramatta Road

HOMEBUSH
Gilbert & Roach Pty. Ltd.
167-173 Parramatta Road

KINGSFORD
John Pelligrini Holden
263-271 Anzac Parade

LAKEMBA
Nash Holden
1018 Canterbury Road

LIVERPOOL
A. C. McGrath & Company
Cnr. Castlereagh St. & Hume Highway

MIRANDA
Greg Ball Holden
1-3 Kiora Road

NEWCASTLE
Young & Green Pty. Ltd.,
745 Hunter Street

PADSTOW
Purnell Bros. Holden
19 Davies Road

PARRAMATTA
Fair Deal Car Sales Parramatta
65 Church Street

PARRAMATTA
Hillsdon's Pty Ltd.,
87 Church Street

PENNANT HILLS
Les Vagg Holden
351-355 Pennant Hills Road

RANDWICK
Boyded Randwick
265 Avoca Street

ROCKDALE
C. V. Holland
571 Princes Highway

RYDE
Muirs Motors (Ryde) Pty. Ltd.,
603-605 Victoria Road

ST. MARY'S
Lance Motors Pty. Ltd.,
Corner Glossop & Harris Streets

SPRINGWOOD
Kerry's Motors Pty. Ltd.,
28 Great Western Highway

TORONTO
Young & Green (Toronto) Pty. Ltd.,
Carey Street

VILLAWOOD
John A. Gilbert
766 Woodville Road

WINDSOR
Hawkesbury Valley Motors
122 George Street

WAITARA
Suttons Motors Waitara
90 Pacific Highway

WARILLA
Wilson's Warilla Pty. Ltd.,
29 Shellharbour Road

WOLLONGONG
Dwyers Pty. Ltd.,
31-33 Crown Street

WYONG
W. M. Holden
Pacific Highway

NEW SOUTH WALES — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- ADELONG
- ALBURY
- ARDLETHAN
- ARMIDALE
- BALLINA
- BARADINE
- BARHAM
- BARRABA
- BATHURST
- BEGA
- BELLINGEN
- BLAYNEY
- BOMBALA
- BOURKE
- BOWRAL
- BREWARRINA
- CANOWINDRA
- CASINO
- CESSNOCK
- COBAR
- COFF'S HARBOUR
- CONDOBOLIN
- COLLARENEBRI
- COOLAMON
- COOMA
- COONABARABRAN
- COONAMBLE
- COOTAMUNDRA
- COROWA
- COWRA
- CROOKWELL
- CULCAIRN
- DENILIQUIN
- DORRIGO
- DUBBO
- DUNGOG
- EDEN
- FINLEY
- FORBES
- GILGANDRA
- GLEN INNES
- GLOUCESTER
- GOULBURN
- GRAFTON SOUTH
- GRENFELL
- GRIFFITH
- GULARGAMBONE
- GUNDAGAI
- GUNNEDAH
- GUNNING
- GUYRA
- HARDEN
- HAY
- HOLBROOK

- INVERELL
- JERILDERIE
- JUNEE
- KANDOS
- KATOOMBA
- KEMPSEY
- KIAMA
- KURRI KURRI
- KYOGLE
- LAKE CARGELLIGO
- LEETON
- LISMORE
- LITHGOW
- MACLEAN
- MACKSVILLE
- MAITLAND
- MILTON
- MOLONG
- MOREE
- MORUYA
- MOSS VALE
- MUDGEE
- MULLUMBIMBY
- MUNGINDI
- MURWILLUMBAH
- MUSWELLBROOK
- NARRABRI
- NARRANDERA
- NARROMINE
- NOWRA
- NYNGAN
- ORANGE
- PARKES
- PEAK HILL
- PORT MACQUARIE
- QUIRINDI
- SCONE
- SINGLETON
- TAMWORTH
- TAREE
- TEMORA
- TENTERFIELD
- TOTTENHAM
- TUMBARUMBA
- TUMUT
- TWEED HEADS
- WAGGA
- WALCHA
- WALLA WALLA
- WALGETT
- WARIALDA
- WARREN
- WELLINGTON
- WEST WYALONG
- WINGHAM
- WOODENBONG
- YASS
- YOUNG

AUSTRALIAN CAPITAL TERRITORY

BELCONNEN
John Wright Holden
Josephson Street

BRADDON
Beazley & Bruce (ACT) Pty. Ltd.
44 Mort Street

PHILLIP
Commonwealth Motors Pty. Ltd.
158 Melrose Drive

FYSHWICK
Beazley & Bruce (ACT) Pty. Ltd.
96 Newcastle Street

VICTORIA — Metropolitan Dealers

BENTLEIGH
Boyanton Holden
280 Centre Road

BERWICK
Neil & Ross Neilson Pty. Ltd.,
Princes Highway

BUNDOORA
Watson Holden
413 Grimshaw Street

BURWOOD
Dustings Hillyer
1200 Toorak Road

CAULFIELD
Booran Holden
1049 Glenhuntly Road

CHELSEA
Harrison Holden
370 Nepean Highway

CHELTENHAM
Balmoral Holden
1212 Nepean Highway

DANDENONG
Patterson Cheney Pty. Ltd.,
200 Cheltenham Road

DANDENONG
Graeme Blanchard Holden
Princes Highway

DONCASTER
Lance Dixon Holden
601 Doncaster Road

ELSTERNWICK
Reg. Hunt Pty. Ltd.,
77 Nepean Highway

ESSENDON
Preston Motors (Essendon) Pty. Ltd.,
205-211 Keilor Road

FAWKNER
Mantello Holden
1263 Sydney Road

FERNTREE GULLY
Neilson Holden F.T.G.
980 Burwood Highway

FOOTSCRAY
Alan Mance Holden
435 Barkly Street

FOOTSCRAY
Patterson Cheney Pty. Ltd.,
130 Moreland Road

FRANKSTON
Bayside Holden
140 Dandenong Road

GEELONG
R. & B. Smith Pty. Ltd.,
510 Moorabool Street

GEELONG
Winter & Taylor (Sales) Pty. Ltd.,
23 Cavendish Street

GLEN WAVERLEY
Geoff Brady Holden
565-577 Springvale Road

HASTINGS
Westernport Holden
762 Flinders Road

HEIDELBERG WEST
Arthur Ellis Holden
66 Bell Street

LILYDALE
Noel Dight Holden
Main Street

MORNINGTON
Peninsula Holden
Cnr. Nepean Highway & Tyabb Road

OAKLEIGH
Garry & Warren Smith Pty. Ltd.,
1575 Dandenong Road

PRESTON
Graham Hunt Holden
518 High Street

RINGWOOD
Bill Patterson Holden
45-57 Maroondah Highway

SOUTH MELBOURNE
Patterson Cheney Holden
132 Sturt Street

SUNSHINE
Kevin Dennis Holden
272 Ballarat Road

WERRIBEE
Ballan Holden
Princes Highway

WEST MELBOURNE
Reg Hunt Holden
577 King Street

VICTORIA — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- ALEXANDRA
- ARARAT
- BACCHUS MARSH
- BAIRNSDALE
- BALLARAT
- BENALLA
- BENDIGO
- BIRCHIP
- BOORT
- CAMPERDOWN
- CASTERTON
- CASTLEMAINE
- CHARLTON
- COBRAM
- COHUNA
- COLAC
- COLERAINE
- CORRYONG
- DAYLESFORD
- DERRINALLUM
- DIMBOOLA
- DONALD
- DROUIN
- ECHUCA
- EUROA
- HAMILTON
- HOPETOUN
- HORSHAM
- KANIVA
- KERANG
- KOOWEERUP
- KORUMBURRA
- KYABRAM
- KYNETON
- LEONGATHA
- MAFFRA
- MANSFIELD
- MARYBOROUGH
- MILDURA
- MINYIP
- MORTLAKE
- NATHALIA
- NHILL
- NULLAWIL
- NUMURKAH
- NYAH
- PORTLAND
- QUAMBATOOK
- RAINBOW
- ROCHESTER
- RUTHERGLEN
- SALE
- SEA LAKE
- SEYMOUR
- SHEPPARTON
- ST. ARNAURD
- STAWELL
- SWAN HILL
- TALLANGATTA
- TIMBOON
- TRARALGON
- UNDERBOOL
- WANGARATTA
- WARBURTON
- WARRACKNABEAL
- WARRNAMBOOL
- WODONGA
- WONTHAGGI
- WYCHEPROOF
- YARRAM
- YARRAWONGA

QUEENSLAND — Metropolitan Dealers

ALBION
Bill Harrison Car Sales
Frodsham Street & Crosby Road

ASPLEY
Zupps (Aspley) Pty. Ltd.,
1442 Gympie Road

CLEVELAND
Russell Smith Holden
Cnr Queen & Doig Streets

IPSWICH
Zupps Holden
246 Brisbane Road, Booval

MOOROOKA
John Sivyer Holden
1060 Ipswich Road

MT. GRAVATT
Zupps Holden
1310 Logan Road

NEWSTEAD
Eagers Retail Pty. Ltd.,
95 Breakfast Creek Road

NUNDAH
Eagers (Northside)
1319 New Sandgate Road

PETRIE
North Pine Motors Pty. Ltd.,
Gympie Road

REDCLIFFE
Village Holden
425 Elizabeth Avenue

SPRINGWOOD
Motorama Holden
Pacific Highway & Brennan Street

WINDSOR
Leach Motors
146 Newmarket Road

WYNNUM
Doug Barton Holden
200 Tingal Road

ROCKLEA
Task Motors
1696 Ipswich Road

QUEENSLAND — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- ATHERTON
- AUGATHELLA
- AYR
- BEAUDESERT
- BEERWAH
- BILOELA
- BLACKALL
- BOWEN
- BUNDABERG
- CAIRNS
- CALOUNDRA
- CHARLEVILLE
- CHARTERS TOWERS
- CLERMONT
- CLONCURRY
- CROWS NEST
- CUNNAMULLA
- DALBY
- DIRRANBANDI
- EMERALD
- GATTON
- GAYNDAH
- GLADSTONE
- GYMPIE
- HUGHENDEN
- INGHAM
- INNISFAIL
- JULIA CREEK
- KILCOY
- KINGAROY
- LAIDLEY
- LONGREACH
- MACKAY
- MAREEBA
- MARYBOROUGH
- MITCHELL
- MONTO
- MOURA
- MORANBAH
- MT. ISA
- MURGON
- NAMBOUR
- NANANGO
- NOOSA HEADS
- PROSERPINE
- QUILPIE
- ROCKHAMPTON
- ROCKLEA
- ROMA
- SOUTHPORT
- SPRINGSURE
- STANTHORPE
- ST. GEORGE
- TARA
- TOOWOOMBA
- TOWNSVILLE
- TULLY
- WARWICK
- WINTON
- YULEBA

SOUTH AUSTRALIA — Metropolitan Dealers

ADELAIDE
City Holden
203-221 Grenfell Street

ADELAIDE
United Motors Retail Ltd.
72 Franklin Street

ELIZABETH
Peter Page Holden
Elizabeth Way

GLENELG
John H. Ellers Pty. Ltd.,
282 Brighton Road

MALVERN
Claridge Motors Pty. Ltd.,
361-367 Unley Road

MILE END
United Motors Retail
71 West Beach Road

PORT ADELAIDE
Smith Motor Co. Pty. Ltd.,
171 Commercial Road

VALLEY VIEW
Plaza Holden
817-839 North East Road

SOUTH AUSTRALIA — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- BALAKLAVA
- BERRI
- BURRA
- CEDUNA
- CLARE
- CLEVE
- CRYSTAL BROOK
- CUMMINS
- GAWLER
- GLADSTONE
- JAMESTOWN
- KADINA
- KEITH
- KINGSCOTE
- KINGSTON
- LAMEROO
- LOXTON
- MAITLAND
- MALLALA
- MENINGIE
- MILLICENT
- MT. BARKER
- MT. GAMBIER
- MURRAY BRIDGE
- NARACOORTE
- ORROROO
- PORT AUGUSTA
- PORT LINCOLN
- PORT PIRIE
- QUORN
- RENMARK
- STRATHALBYN
- TANUNDA
- VICTOR HARBOUR
- WAIKERIE
- WHYALLA
- WUDINNA
- YANKALILLA
- YORKETOWN

NORTHERN TERRITORY — Dealers

ALICE SPRINGS
Kittle Bros. (Alice Springs) Pty. Ltd.,
Cnr Wills Terrace & Railway Terrace

DARWIN
Suttons Motors (Darwin) Pty. Ltd.,
Cnr Mitchell and Knuckey Streets

WESTERN AUSTRALIA — Metropolitan Dealers

BELMONT
Major Motors
225 Great Eastern Highway

CANNINGTON
Brian Gardner Holden
1308 Albany Highway

FREMANTLE
Shacks Holden
64 Queen Victoria Street

GOSNELLS
Lance Gibbons Holden
2325 Albany Highway

MANDURAH
Estuary Holden
1 Gibson Street

MELVILLE
Melville Motors Pty. Ltd.,
532-536 Canning Highway

MIDLAND
John Goldie Holden
161 Great Eastern Highway

MORLEY
Metro Motors Pty. Ltd.,
212 Walter Road

NAVAL BASE
Shacks Cockburn
15 Rockingham Road

OSBORNE PARK
North City Holden
Cnr. Scarborough Beach Rd.
& Harborne Street

PERTH
City Motors
505 Newcastle Street

VICTORIA PARK
Young's Holden
529 Albany Highway

WANNEROO
Phoenix Holden
316 Berriman Drive

WESTERN AUSTRALIA — Country Dealers & Service Dealers

Consult your local Yellow Pages under Motor Cars — New for Addresses and Telephone Numbers.

- ALBANY
- BEVERLEY
- BOYUP BROOK
- BRIDGETOWN
- BROOKTON
- BRUCE ROCK
- BUNBURY
- BUSSELTON
- CARNAMAH
- CARNARVON
- COLLIE
- CORRIGIN
- CRANBROOK
- DALWALLINU
- ESPERANCE
- EXMOUTH
- GERALDTON
- GNOWANGERUP
- GOOMALLING
- KALGOORLIE
- KAMBALDA
- KATANNING
- KELLERBERRIN
- KOJONUP
- KUNUNURRA
- MANJIMUP
- MERREDIN
- MOORA
- MORAWA
- MT. BARKER
- NAREMBEEN
- NARROGIN
- NORSEMAN
- NORTHAM
- PINGELLY
- PINJARRA
- PORT HEDLAND
- QUAIRADING
- WAGIN
- WILLIAMS
- WYALKATCHEM

TASMANIA — Metropolitan & Country Dealers & Service Dealers

HOBART
Motors Pty. Ltd.,
179 Macquarie Street

BURNIE
Motors Pty. Ltd.,
84-89 Marine Terrace

DEVONPORT
Motors Pty. Ltd.,
628 Victoria Parade

KING ISLAND
King Island Motors Pty. Ltd.,
Netherby Road, Currie

LAUNCESTON
Motors Pty. Ltd.
165 Brisbane Street

SMITHTON
Motors Pty. Ltd.,
16 Nelson Road

ULVERSTONE
Motors Pty. Ltd.,
99 Reibey Street

SECTION 5 APPEARANCE CARE

CLEANING OF INTERIOR

CAUTION: Many cleaners may be toxic or flammable, or may cause damage to the interior. When cleaning the interior, do not use volatile cleaning solvents such as: acetone, lacquer thinners, enamel reducers, nail polish removers; or such cleaning materials as laundry soaps, bleaches or reducing agents. Never use carbon tetrachloride, gasoline or naphtha for any cleaning purpose.

Be sure the vehicle is well ventilated while using any cleaning agents. Follow the manufacturer's recommendations when using such products.

Care and Cleaning of Upholstery

Dust and dirt particles which accumulate on the surface of the interior trim should be removed every few weeks — more often with constant hard driving. This can be done readily with a vacuum cleaner. Before attempting to remove spots and stains from an upholstery fabric, it is necessary to determine as accurately as possible:

1. The type of fabric.
2. The nature and age of the stain.
3. The effect of the stain removal agent upon the colour, structure and general appearance of the trim material.

It is essential that stains be removed from the trim material as soon as possible after they have been made. If they are allowed to remain on the fabric for any length of time they very often become oxidised or set, and removal becomes difficult, if not impossible.

The use of AC Delco Velour Fabric and Vinyl cleaner will assist in the above.

After cleaning or better still before using the vehicle, apply AC Delco Fabric Protector to maintain a fresh clean appearance and to protect the fabric from further soiling.

Cleaning P.V.C. Coated Fabrics

Vinyl (P.V.C.) coated fabrics are used for seating, headlining and auxiliary trimming. The grades used vary according to their function. P.V.C. fabrics are generally made with fabric bases upon which synthetic resins are applied. Care of P.V.C. fabrics is a relatively simple but important matter. The surface should be wiped over with a dry cloth during the regular cleaning of the vehicle.

Should dirt accumulate and become embedded in the material pattern the following procedure is recommended.

1. Using luke warm water and soap, or AC Delco Velour Fabric and Vinyl Cleaner, work up thick suds on a piece of cheesecloth, and apply to the surface. A soft bristle brush can be used to advantage to remove stubborn stains or dirt embedded in the grain of the material.
2. Repeat using only a damp cloth and no soap.

3. Wipe dry with a soft cloth.

The above cleaning instructions also apply to the rubber floor mats.

Cleaning Cloth Trim Material

Where the seats in your vehice are upholstered with cloth the following instructions should be observed. Most loose dirt and dust can be removed by a vacuum cleaner or a soft brush. DO NOT USE a whisk broom or a coarse hair brush. If normal soiling should take place it is recommended that the fabric be sponged lightly with warm water containing a detergent and a small amount of ammonia. The fabric should then be rubbed lightly, and if necessary, sponged again to remove anything stubborn. Soak up excess fluid with dry cloth. AC Delco Velour Fabric and Vinyl Cleaner may be used to advantage, but should be used sparingly.

The application of AC Delco Fabric Protector when your vehicle is new will help to protect the fabric from oil, grease and water-borne stains.

Cleaning Leather Trim Material

To remove surface dust and grit, regularly wipe leather with 'Softly' in warm water using a soft cloth or sponge. Clean leather every 3 months with a mild saddle soap and a damp soft cloth, to remove in-ground dirt which is not visible. Allow leather to dry naturally and apply a colourless beeswax dressing.

Do not use detergents, solvents, abrasives, spray packs or unidentified leather cleaners or suede cleaners.

Cleaning Carpet

Thoroughly brush or vacuum the carpet. In many instances the carpet may require no further cleaning. If the carpet is extremely soiled, thoroughly vacuum it to remove loose dirt then using AC Delco Velour Fabric and Vinyl Cleaner, clean approximately one square foot at a time. After each area is cleaned remove as much of the cleaner as possible with a vacuum cleaner. After cleaning the carpet, use an air hose to fluff the carpet pile, then dry the carpet. After the carpet is completely dried, use an air hose to again fluff the carpet pile.

Cleaning Seat Belts

Cleaning of the seat belts can be carried out by using a mild non-abrasive soap and luke warm water. After washing be sure to thoroughly sponge the washing solution out of the belts.

CAUTION: Do not bleach or dye belts since this may severely weaken them.

Cleaning Ash Trays

Insert Type

To remove, open the lid of the ash tray and use the lid to pull out the ash tray complete. The tray can then be emptied and cleaned. To replace, reverse the procedure.

Tilt-Open Type
To remove, open ash tray, depress the spring loading tab in centre and carefully withdraw. The tray can then be emptied and cleaned. To replace, reverse the procedure.

Cleaning Interior Glass

The interior glass area of the vehicle should be cleaned using AC Delco Glass Cleaner with a clean soft cloth. Care must be taken when cleaning inside the rear windscreen so as not to damage the heating element.

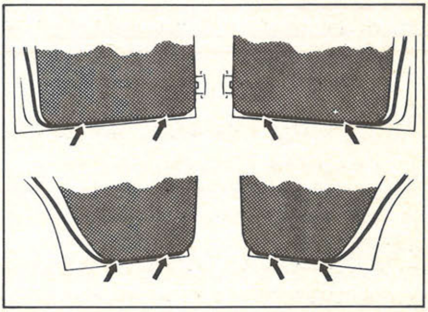
Never use abrasive cleaners on any car glass, as they may cause scratches.

CLEANING OF EXTERIOR

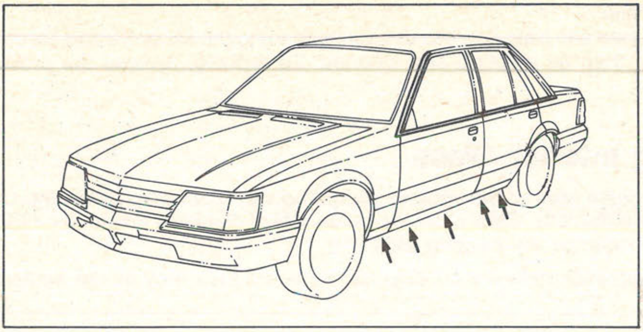
CAUTION: Care should be used when moving the vehicle after washing, in case water has affected the brakes. Refer to caution in Section 2 — "Starting & Driving Your Vehicle" for procedure to follow if water gets into your brakes.

Before washing the paintwork on your vehicle check that the door drain holes and rocker sill vents are not blocked. Also the underbody should be cleaned to remove deposits of mud and corrosive products.

1. **Underbody Cleaning**
   The effects of salts and other corrosive materials from road surfaces can result in accelerated rusting and deterioration of underbody components such as brake and fuel lines, frame, underbody floor pan, exhaust system, brackets, parking brake cables. These corrosive effects, however, can be reduced by periodic hosing of the underbody with plain water whenever the vehicle is being washed. In geographic areas having a heavy concentration of corrosive materials it is recommended that the complete underbody be inspected and washed at least once each year, preferably after a winter's exposure. Particular attention should be given to cleaning out underbody members where dirt and other foreign materials may have collected.
2. **Door Drain Holes**
   It is important that the drain holes at the bottom of the door panels are checked to make sure that they are free of dirt and foreign matter, which could trap water inside the panels. Clogged drain holes can be cleaned with a small screwdriver and these drain holes are angled back towards the rear of the vehicle. (Refer illustration.)



3. **Rocker Sill Vents**
   In all models there are vents which should be regularly checked to see that they are clear of blockage, using a blunt ended instrument. These vents are formed as cutouts in the sheet metal along the bottom edge of the rocker sill. (Refer illustration on next page.)



Washing Paintwork

The acrylic lacquer finish on your vehicle is superior to ordinary lacquers and will stay bright and new looking for years with little or no polishing, provided it is given a reasonable amount of regular washing to keep off road grime.

Washing not only removes dirt and road grime that settles on the vehicle, but also dilutes acids which accompany such grime, in particular, salt from air or sea spray encountered in coastal areas which often become trapped in crevices. Tree sap, road tar, excretion from insects and industrial fall out often contain harmful chemicals and other foreign matter that may permanently damage the paint finish of the vehicle. These should be removed without delay, using an effective removal agent.

Regular Washing

If the vehicle is in continuous use, it should be washed at least once a week with either cold or warm water (preferably running water), using clean chamois leathers, sponges or rags free from dirt or grit likely to scratch the paint finish. It is good practice to first hose the vehicle to remove as much of the grit and grime as possible before swabbing the surface. Do not wash the vehicle under bright sunlight when high temperatures are being experienced, as this will result in a streaky, watermarked finish.

AC Delco Wash and Wax loosens road grime to make washing easier and leaves paint shining clean.

Do not use hot water, strong soap or chemical detergents. Any cleaning agent used should be flushed promptly from the surface and not allowed to dry on the finish.

Removing Grease, Oil and Tar Spots

Grease and oil, and even tar if it's fresh, can be removed from the finish with a little Kerosene or White Spirits. As a precaution against staining, wash and polish as soon as possible the area from which the foreign matter has been removed.

WARNINGS:

(1) Some chemical cleaners used for removing road oils and tars from painted surfaces have been found to be detrimental to acrylic finishes. When purchasing a cleaner, polish or wax, ensure that it can be safely used on an acrylic finish.

(2) If petrol is spilt on the paint finish when refilling, owners are advised to ensure that

it is flushed off with clean water immediately. The reason is that petrols have a tendency to stain or soften new paint finish during the weathering out period, particularly when the vehicle is exposed to high temperatures.

Insect Spots

Insect spots on the paint finished parts of the vehicle can be easily washed off by using a solution containing 1 litre of water in which approximately 110 grams of baking soda (Bicarbonate of Soda) has been dissolved. Flush the washed parts with clean water.

Polishing

Even though the acrylic lacquer finish on your vehicle is more durable than ordinary lacquers, under certain conditions you may wish to polish your vehicle to provide maximum protection against road dirt and industrial fall out etc. Also, the application of a polish may be required to remove foreign matter which is not normally removed from vehicles by washing. Over a period of time, such foreign matter may build up on the paint surface to the detriment of its overall appearance.

DO NOT ATTEMPT TO APPLY A POLISH WITHOUT FIRST WASHING TO REMOVE EXISTING LOOSE GRIT, SURFACE DIRT, DUST OR GREASE ETC.

Either AC Delco Liquid Silicon Polish or AC Delco Polishing Cream will quickly and easily impart a deep, rich shine when used as directed on the container.

Painted plastic bumpers or body side mouldings may be cleaned and polished according to the instructions given above for vehicle paintwork.

Paint Work Inspection

Regular inspection of the vehicle should be made for scratch marks, cracks or damaged areas, all of which could develop rust and thus affect paint finish. Any deep scratches, cracks or break-down in the finish should be repaired without delay. Care should be taken to ensure that any rusting is counteracted immediately, otherwise rust "creep" will extend beyond the damaged area. This applies particularly in sub-tropical areas or coastal districts, where the moist or salt-laden atmosphere accelerates rusting if it is allowed to develop through neglect. The paint finish of the vehicle gives a very high degree of protection against the weather, but it should be realised that wear and deterioration occur when the vehicle is exposed to elements for prolonged periods. The vehicle therefore should be garaged whenever possible.

Chromium Plated Parts

Generally, a rub with a clean soft cloth will be all that is necessary to remove dust from the chromium plated parts. However, if the chromium is covered with dead insects or mud, it should be washed with warm soapy water and then cleaned with AC Delco Polishing Cream. This polish should also be used if the chromium shows signs of tarnishing. Do not use ordinary metal polishes as they may contain abrasives which would ruin the plating.

Glass Cleaning — General

Special care should be taken to avoid scratching the glass when it is being cleaned. If it is cleaned at the same time as the rest of the vehicle, there is a possibility that particles of grit will cause fine scratches. Flush off any heavy mud deposits on the glass when washing the body, but leave the final cleaning and polishing until afterwards. Use AC Delco Glass Cleaner and wash each section of glass in turn, making sure that the water, its container and the sponge are quite clean and free from grit. Clean old linen cloth is better than new material for polishing glass.

Windscreen Cleaning

It is important, at all times, that the windshield surface be maintained in a clean condition so that the wiper blades may be as effective as possible in wiping clean the surface. Old wiper blades can cause windscreen scratching therefore they should be inspected regularly and replaced as necessary.

Abrasive materials must never be used to clean glass as they can cause scratches. A scratched windshield will cause difficulty in achieving proper vision, particularly in night driving. After the windshield has been cleaned with a wet sponge etc., it should be wiped over with a soft lint free cloth or chamois.

It is recommended that AC Delco Optikleen be added to the windscreen washer reservoir to assist the wipers in keeping the windshield clean whilst driving.

Wiper Blades — Cleaning

Much of the oil road scum thrown up onto the windshield glass, causing smearing when the wiper is switched on, transfers onto the wiper blade. Many owners, whilst they methodically clean the windshield glass, omit to clean the wiper blades and consequently smearing of the glass re-appears immediately the wiper blades are set in motion. The blades can be cleaned by simply lifting them off the windshield glass and then using warm water and a recognised washing fluid. If so desired, the wiper blade can be removed from the arm for cleaning purposes by simply disengaging it from the arm in accordance with the following instructions —

1. Lift up tab at the end of the arm and remove blade sideways.
2. To replace, slide the blade pin into the hole in the arm clip, noting an audible click.

IMPORTANT: Do not operate the wiper blades by hand as this may damage the wiper drive mechanism.

In dry conditions, if the wiper blades are used to clean dust and dirt from the windshield always use the washer system to wet the windshield. Ensure that the windshield washer reservoir is checked regularly all the year round.

Should the wiper blades be frozen to the windshield, it is imperative that they be lifted off and freed by hand before switching on the windshield wiper system.

Tyres

Sponging with cold water is all that is necessary for normal cleaning of the tyres. Oil and grease can, and should be removed with soap and water or detergent. For tar or other substances, a mild abrasive, such as mechanics' hand soap or kitchen cleaning powder, may be used if necessary. Thoroughly wash the tyres with water to finish. Petrol must not be used for cleaning tyres.

New tyre look can be restored by using AC Delco Tyre Black.

Cleaning Alloy Wheels

To preserve the original appearance of alloy wheels (where fitted) keep them clean and free from build up of road dirt. AC Delco Mag Wheel Cleaner can be used for cleaning most alloy wheels, however, it is not suitable for cleaning highly polished alloy wheels. (Refer to instructions on can.) Do not use abrasive cleaners, as they could damage the protective coating.

APPEARANCE CARE AND MAINTENANCE MATERIALS

GMH PART NO.	SIZE	DESCRIPTION	USAGE
M37432	390 x 370mm	Synthetic Chamois	Absorbs water and cleans paint, glass and chrome surfaces.
M37226	375ml	Wash & Wax	Cleans away dirt and grime at the same time adds a lustrous shine.
M37221	375ml	Liquid Silicon Polish	Imparts a high gloss, long lasting shine.
M37220	250g	Polishing Cream	Restores lustre to dull and faded paint.
M38695	250ml	Glass Cleaner	Cleans all glass surfaces.
M37933	500ml	Optikleen	Windshield washer solvent.
M38692	250ml	Mag Wheel Cleaner	Cleaning of all magnesium alloy wheels.
M38693	400g	Fabric Protector	Repels oil, grease and water-borne stains on most fabrics.
M38424	350g	Velour Fabric and Vinyl Cleaner	Cleans and deodorises velour, most fabric and vinyl upholstery, hood linings, mats and carpets.
M38696	250ml	Vinyl and Rubber Conditioner	Preserves and protects vinyl, leather and rubber.
M37429	304 x 250mm	Demister Cloth	Delays formation of mist on treated glass surfaces.
M38694	250ml	Tyre Black	Low-sheen natural rubber finish for tyres.
M37223	400g	Degreaser	Removes oil and grease from motors.
M37225	175g	AC-4	— Dispenses moisture on wet motors and electrical components. — Penetrates and loosens rusted or seized parts. — Lubricates and protects against corrosion. — Inhibits corrosion on battery terminals.
—	500ml	Brake Fluid	Extra heavy duty for use at brake service.
M39060	500ml	Engine Coolant and Corrosion Inhibitor	— Helps protect radiators and cooling system. — Prevents rusting and sludge build-up.
M33028	27g	Solid Oil	Lubricant for locking mechanisms, door hinges, sticking windows.

SECTION 6A GENERAL MAINTENANCE INFORMATION

GMH QUALITY SERVICE & PARTS

General Motors-Holden's Limited recommends that your vehicle be serviced at authorised GMH Dealers. These dealerships are equipped with facilities, trained personnel and General Motors parts to service and maintain your vehicle to factory recommendations.

The routine checks and scheduled maintenance services your car requires are described in the ''GMH Maintenance Plan'' in Section 6B of this handbook. Also included in Section 6B are the Owner's and Dealer's responsibilities releated to servicing of vehicles. Ensure that you fully understand these responsibilities as failure to do so may affect your warranty.

The ''GMH Maintenance Plan'' is supplemented by this section (6A) which describes in detail many of the items that require servicing. GMH also publishes various service manuals which are available from your Dealer or from:—

Stan H. Earle,
46 Isabella Street,
Moorabbin, Vic., 3189.

CAUTION: As with any machine, take care when making any check, doing any maintenance, or making any repair, to avoid being injured. Note that some of the materials in this car may be hazardous if used, serviced, or handled improperly. Improper or incomplete service could also lead to the vehicle not working properly which may result in personal injury, or damage to the car or its equipment. If you have any question about carrying out some service, have the service done by a skilled technician.

REPLACEMENT FASTENERS

During vehicle maintenance, any fasteners used to replace older ones must have the same measurements and strength as those removed, whether metric or imperial. (The numbers on the heads of metric bolts and on the surfaces of metric nuts show their strength. Imperial bolts use radial lines to show this, while most imperial nuts do not have strength markings.) Fasteners taken from the car should be saved for re-use in the same spot except where a mandatory replacement is required. Where a fastener cannot be used again, take care to choose a replacement that matches the old one. When retightening always use the specified torque (refer to Service Manual). For information and help, see your GMH dealer.

CAUTION: This car is primarily dimensioned in the metric system. Most fasteners are metric and many are very close in dimension to common imperial fasteners. Mismatched or incorrect fasteners can result in damage to the car or possibly personal injury.

ENGINE OIL AND FILTER RECOMMENDATIONS

It is vital that the following engine oil recommendations are adhered to if you are to obtain optimum reliability and life from your vehicle's engine.

Initial Oil Fill and Running-In

A high quality 'SE' oil was installed in your engine at the factory. It is not necessary to change this factory installed oil prior to the first recommended normal change period. During the running-in period you should check the oil level more frequently since oil consumption may be higher until the piston rings become seated.

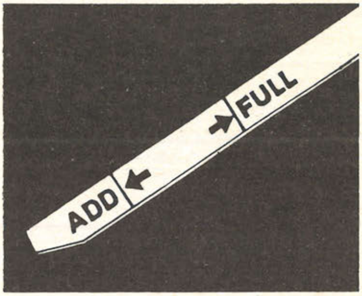
Checking Oil Level

The engine oil must be maintained at the right level to assure proper lubrication of your car's engine. It is the owner's responsibility to check the oil level at regular intervals, according to the following instructions.

- The best time to check the engine oil level is when the oil is warm, such as during a fuel stop. To check the oil level accurately, the vehicle must first be on level ground. After stopping the engine, wait a few minutes for the oil to drain back to the oil pan.

  Then, remove the dipstick and wipe it clean with clean cloth or paper. Reinsert the dipstick firmly all the way down, pause for a second then withdraw the dipstick and look at the oil level on it. The dipstick is marked ADD and FULL. The oil level should be maintained between the two markings, neither going above the FULL mark nor under the ADD mark.

  The distance between the ADD and FULL marks represents approximately 1 litre of oil on all engines. Remember to reinsert the dipstick firmly after taking the reading.



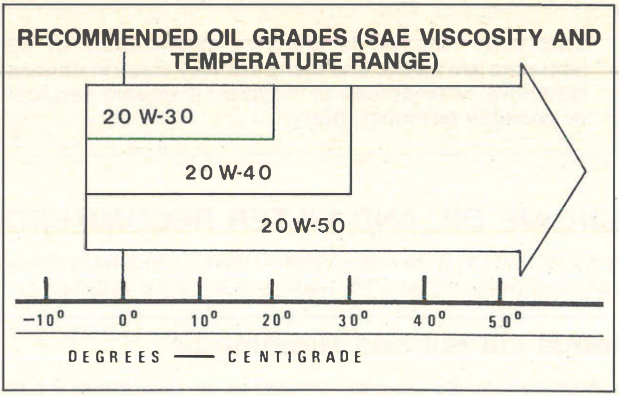
- If you check the oil level when the oil is cold do not run the engine first. The cold oil will not drain back into the oil pan fast enough to give a true oil level.

Choosing the Right Quality and Grade of Oil

Use only premium quality SE or SF oil (API Service classification) having the correct S.A.E. Viscosity grade suitable for the climatic conditions in which the vehicle is driven. Refer to the chart below when choosing suitable engine oil grade to suit the ambient temperature range anticipated for the period during which the oil will be used.

NOTE: For E.F.I. engines operating for extended periods at high speeds or high loads in ambients above 35°C SF grade oil is recommended.

IMPORTANT: Non-detergent, break-in oils and other low quality oils are specifically not recommended for use in your engine. Similarly, the use of tune up compounds, friction reducing compounds and other supplemental additives is not recommended. Use of any of these may void your new vehicle warranty.


RECOMMENDED OIL GRADES (SAE VISCOSITY AND TEMPERATURE RANGE)

Oil Change Intervals

The interval between oil changes depends upon what you use the car for and where it is driven. If the vehicle is operated under **extreme conditions** such as continuous driving on dusty roads, towing long distances or stop/start short distance driving, then the oil will need to be changed more frequently.

The chart below should assist in determining the proper oil change intervals.

TYPE OF USE	CHANGE INTERVAL
OPERATING IN DUSTY AREAS	CHANGE ENGINE OIL EVERY 5,000 KILOMETRES OR 3 MONTHS, WHICHEVER COMES FIRST
TOWING A TRAILER	
IDLING FOR EXTENDED PERIODS AND/OR LOW SPEED OPERATION SUCH AS FOUND IN CITY TAXI OPERATION AND DOOR-TO-DOOR DELIVERY SERVICE	
OPERATING WHEN OUTSIDE TEMPERATURES REMAIN BELOW 5°C AND WHEN MOST TRIPS ARE LESS THAN 5 KILOMETRES	
E.F.I ENGINES OPERATING FOR EXTENDED PERIODS UNDER HIGH SPEEDS AND/OR LOADS IN AMBIENTS ABOVE 35°C	
OPERATING ON A DAILY BASIS, AS A GENERAL RULE, FOR SEVERAL KILOMETRES AND WHEN NONE OF THE ABOVE CONDITIONS APPLY	CHANGE ENGINE OIL EVERY 10,000 KILOMETRES OR 6 MONTHS, WHICHEVER COMES FIRST

Used Oil Disposal

Do not dispose of used engine oil (or any other oil) in a careless manner such as pouring it on the ground, into sewers, or into streams or bodies of water. Instead, recycle it by taking it to a used oil collection facility which may be located in your area. If you have a problem disposing of your used oil, it is suggested that you contact your dealer or a service station.

Oil Filter Replacement

The full-flow oil filter, with non-return check-valve, filters all the engine oil delivered by the oil pump. For this reason the filter change interval is very important.

The oil filter should be replaced every 6 months or 10,000 kms, whichever occurs first. However, under prolonged dusty driving conditions it is recommended that the filter be replaced every 5,000 kilometres or 3 months, whichever occurs first.

NOTE: When replacing the oil filter remember to add additional oil. Refer to engine oil capacities, Section 7. Always use high-quality filters such as AC filters.

Some Notes on Oil Consumption

Every internal combustion engine uses a certain amount of oil, especially during the running in period. Your engine is dependant on oil to lubricate the cylinder walls, pistons, rings and valve stems. A thin film of oil is left on the cylinder walls, some of which is carried into the combustion chamber and burnt during the combustion process. This also applies to the film of oil on the valve stems which is drawn into the combustion chamber and burnt.

There are several other factors that contribute to the rate of oil consumption in your engine, apart from mechanical malfunctions such as worn pistons, rings, valve stems and guides. These factors are: the way in which the vehicle is operated, the quality and grade of oil, the oil level, and dilution of the oil.

- **Operation of the Vehicle**
  Sustained high engine speeds will increase oil consumption because higher speeds increase engine temperature which lowers oil viscosity thus allowing more oil to reach the combustion chamber. Towing a heavy load will also result in increased oil consumption due to increased engine temperature and hence lower oil viscosity.

  It is recommended that heavy load towing be done only after the vehicle has been 'run-in'.

- **Quality and Grade of Oil**
  Oil viscosity is a significant factor in oil consumption, therefore if you use an oil which is too "thin" (low viscosity) your oil consumption will increase. Refer to the chart in this section for the correct grade of engine oil to suit your driving conditions.

- **Oil Level**
  Maintaining a proper oil level is also an important factor in controlling oil consumption. An overfull crankcase allows the reciprocating parts of an engine to splash oil onto the cylinder walls in quantities greater than the piston rings can control. This excess oil will be drawn into the combustion chamber and burnt. Refer to 'Checking Oil Level' in this section for maintaining correct levels.

- **Dilution**
  Probably the most prevalent complaint of oil consumption comes from the motorist whose vehicle is frequently driven at below normal operating temperatures. The oil becomes

diluted by fuel and moisture which settles in the oil pan and may even raise the oil level creating a false reading on the oil level dipstick. For example, in a vehicle that has accumulated 1,500 kilometres of short distance or intermittent city operating and has consumed a normal amount of oil, the level may not have dropped from the "Full" mark, due to dilution. If this vehicle is driven for some distance at highway speeds on a warm day, the dilution elements evaporate, lowering the oil level and the motorist assumes the oil "lost" has been consumed in the highway operation.

After taking into account the above factors, if you are still concerned that your engine has excessive oil consumption then you should discuss the situation with a GMH Dealer. Remember that an engine's oil consumption should not be judged until it has run at least 7,000 kilometres.

TRANSMISSION OILS

Manual Transmission Oil Level

The oil level in the manual transmission must be checked and/or replaced at the intervals specified in the Maintenance Plan.

With the vehicle standing on level ground, remove the filler plug and check that oil is level with bottom of filler plug opening.

4 speed (M21) Transmission:	Filler plug (hexagon head) is located on the left hand side of transmission.
4 speed (MC6) Transmission:	Filler plug (square head) is located on the right hand side of transmission.
5 speed (M76) Transmission:	Filler plug (Allen Key head) is located on the right hand side of transmission.

For the correct specification of oil to use in the transmission refer to the lubricant chart in Section 7, "Specifications".

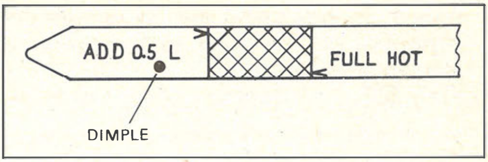
Automatic Transmission Oil Level

The oil level in the automatic transmission must be checked or replaced at the intervals specified in the Maintenance Plan. The transmission oil will need to be checked and/or replaced more often if the vehicle operates under extreme conditions. (See "Vehicle Operating Conditions", in Section 6B.)

Fluid Level — Hot Check

The car should be driven for several kilometres until the transmission is at normal operating temperature. With the vehicle standing on level ground, apply the park brake and move the shift lever to Park position. You must check the fluid level with the engine running at idle speed. Remove the dipstick located at the right rear side of the engine, wipe it with a clean cloth and reinsert it fully. Now remove it again and read the fluid level. If the level is at or below the ADD mark, add fluid until the dipstick reads FULL. It takes only 0.5 litre to raise the level from ADD to FULL. Do not overfill. When rechecking level, allow sufficient time for the oil to run down the filler tube into the oil pan as oil on the inside of the tube will give a false reading.

Extreme cleanliness should be exercised during checking and refilling since dirt particles entering the transmission could cause severe malfunctions.



AUTO TRANSMISSION DIPSTICK

Fluid Level — Cold Check

The FULL mark on the dipstick represents the correct level for a transmission that is fully warmed up. However, should the fluid level have to be checked when the transmission is cold the following procedure is recommended.

With the vehicle on level ground, apply the park brake and then start the engine. Move the transmission shift lever through the range of positions twice to ensure that fluid flows completely through the valve body.

With the transmission in PARK and the engine idling, add sufficient fluid to bring the level to the dimple, located several millimetres below the ADD mark on the dipstick. The level must be rechecked, after the transmission has been thoroughly warmed, using the Hot Check procedure described previously.

For the correct specification of oil to use in the automatic transmission refer to the Lubricant chart in Section 7.

Servicing

As all adjustments, cleaning and servicing of automatic transmissions requires specialised equipment and knowledge it is recommended that these operations be performed by an authorised GMH Dealer.

REAR AXLE OIL

Refer to the Maintenance Plan to find out how often the lubricant level should be checked.

Add lubricant if needed, to fill to the level of the filler plug hole located in the rear cover of the differential carrier housing. Use only the lubricant specified in the Lubricant Chart in Section 7.

POWER STEERING SYSTEM

Check the fluid level in the power steering system at the intervals recommended in the Maintenance Plan.

On vehicles where the power steering pump and reservoir are an integral unit the fluid level is checked with a filler cap dipstick. On vehicles where the pump and reservoir are separate units the fluid level is checked at the plastic reservoir which is mounted forward of the left hand strut tower.

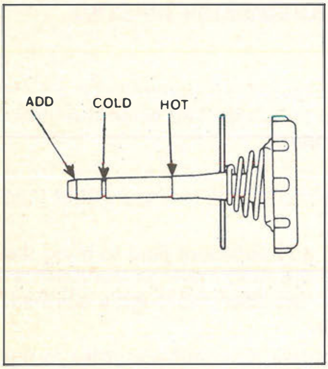
For both systems the fluid level should be maintained as follows:—

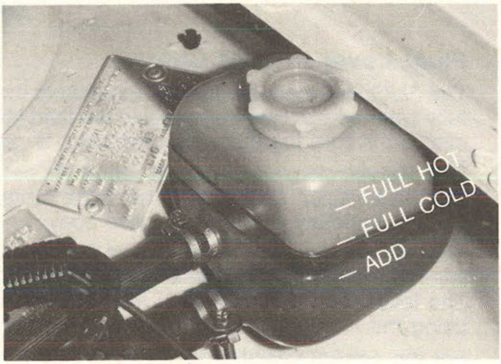
- If the fluid is warmed up, the fluid level should be between the FULL HOT and FULL COLD marks on the reservoir or filler cap dipstick as is the case.

- If cold, the fluid level should be between the ADD and FULL COLD marks.
- If the fluid is at or below the ADD mark (hot or cold) fluid should be added to the appropriate level.

Refer to Lubricant chart in Section 7 for the correct power steering fluid to use.

This fluid does not need periodic changing.





NOTE: The plastic reservoir mounted near the left side strut tower has stainless steel wire mesh fitted inside it. Do not remove or reposition this mesh otherwise the power steering sysem performance could be affected.

ENGINE COOLING SYSTEM

CAUTION: If your cooling system overheats, see "Engine Overheating" in Section 3. Continued operation of the engine even for a short time could result in a fire and the possibility of personal injury and/or severe vehicle damage.

Coolant Recovery System

Your car is fitted with a coolant recovery system. As the car is driven, the engine coolant is heated and expands. The radiator pressure cap senses this expansion and releases coolant out through the overflow hose into the coolant recovery reservoir. This reservoir is situated in the engine compartment behind the right hand strut tower. When the vehicle has stopped and the system cools down, coolant is drawn back into the radiator.

Radiator Pressure Cap

This cap is designed to allow the cooling system to operate at temperatures over 100°C without boiling. It does this by causing the system to operate under pressure which in turn raises the boiling point of the coolant. The pressure rating of the radiator cap is specified in Section 7 of this Handbook. Have the cooling system and radiator cap pressure tested routinely according to GMH Maintenance Plan. If a replacement cap is needed be sure to use only a cap which is specified for your model.

Thermostat

The engine coolant temperature is controlled by a thermostat. It stops coolant flow through the radiator until a preset temperature is reached. This thermostat is installed in the engine coolant outlet on the engine block. The same thermostat is used in both winter and summer. If your engine is overheating or running too cool then the thermostat should be checked for correct operation.

Corrosion Protection

To protect components of the cooling system from corrosion your new vehicle was filled with coolant containing corrosion inhibitor to GM Specification HN1109. It is recommended that all future additions of coolant to the system should be made with a pre-mixed coolant comprising clean water and corrosion inhibitor meeting GM Specification HN1109. Use 200ml inhibitor for a complete refill.

IMPORTANT: Corrosion inhibitor performance cannot be guaranteed at concentrations other than those specified.

If you live in an area where water has a high level of mineral or chemical content use rainwater or distilled water. If you need to use bore water in an emergency, change it for the correct coolant as soon as possible.

Use of Anti-Freeze Fluid

If your vehicle is to be parked overnight or operated for any length of time in regions where temperatures of 0°C or below are encountered the use of a suitable brand of anti-freeze fluid is essential.

The recommended anti-freeze fluid is permanent type (ethylene/glycol) to GM Specification 1899-M. Follow carefully the anti-freeze manufacturer's instructions when adding anti-freeze to the cooling system.

For protection down to −16°C and also to provide adequate corrosion resistance, use a mixture of not less than 35% (by volume) anti-freeze and 65% (by volume) of clean water. For protection in more severe conditions use greater percentage of anti-freeze.

Anti-freeze also contains a corrosion inhibitor therefore it is not necessary to add a separate inhibitor.

IMPORTANT: Do not mix different types of anti-freeze or corrosion inhibitors as they may be incompatible. If a different type has been used in the cooling system flush the system with clean water before refilling with coolant containing the recommended corrosion inhibitor or anti-freeze fluid.

CAUTION: Corrosion inhibitors and anti-freeze fluids are poisonous. Use extreme care when handling these materials, particularly when draining your vehicle's cooling system. If swallowed seek medical attention.

Cold Weather Draining

If your vehicle's cooling system does not contain anti-freeze then the radiator and cylinder block must be drained before parking in freezing conditions. Failure to do so could result in bursting the radiator and/or cracking the cylinder block if the coolant freezes.

NOTE: Draining of the engine radiator and cylinder block will not drain the coolant out of the heater core therefore it may still be subject to freezing damage.

Checking Coolant Levels

The amount of coolant in the cooling system is to be checked as follows:

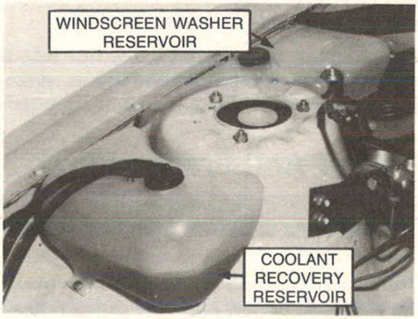
The level in the radiator should be checked at least weekly, preferably when the engine is cold. Follow the instructions under Coolant Replacement (see following paragraph) for the correct way to remove the radiator cap and add coolant.

CAUTION: Do not remove the radiator cap when the engine and radiator are hot. Scalding fluid and steam can be blown out under pressure if the cap is removed from a hot radiator.

The level of coolant in the recovery reservoir should be checked at regular intervals e.g. when refuelling at a service station.

When the engine is cold the coolant level should be at or just above the 'MINIMUM' mark on the reservoir. When the engine is at normal operating temperature the level should be somewhere between half full and the 'MAXIMUM' mark on the reservoir. If required, top up the recovery reservoir with a mixture of water and GMH recommended corrosion inhibitor or anti-freeze fluid depending on which additive is being used in the cooling system.

If you regularly have to add coolant to either the radiator or the recovery reservoir you should see your GMH dealer for a cooling system check.



Coolant Replacement

To maintain the cooling system in good condition it is recommended that every 12 months or 20,000 km the coolant be replaced. This will ensure that the accumulation of scale and corrosion products is kept to a minimum thereby keeping the cooling system clean and operating efficiently.

Drain, flush and refill the cooling system as follows:—

1. When the engine is cool, remove the radiator cap as follows:
   - Turn the cap slowly to the left until it reaches a "stop". Do not press down while turning the cap.
   - Wait until any remaining pressure (indicated by a hissing sound) is relieved, then press down on the cap and continue turning it to the left until it can be removed.
2. To drain the coolant, locate the lower radiator hose and loosen the clamp fastening this hose to the radiator. Now disconnect this hose. Drainage may be speeded by removing the drain plugs in the cylinder block. These are hexagon head plugs located midway along each side of cylinder block, above the oil pan flange.
3. Now reconnect the lower radiator hose and install the cylinder block drain plugs if removed. Refill the system with clean water and run the engine for a short time to allow the coolant to circulate right through the system.

4. Drain the coolant again as per step 2. Reconnect the lower radiator hose and reinstall block drain plugs, if removed.
5. Refill the system with premixed coolant comprising clean water and corrosion inhibitor (meeting GM Specification HN1109) or anti-freeze fluid (meeting GM Specification 1899-M). Use concentrations specified in previous sections 'corrosion protection' and 'use of anti-freeze'.

   Fill the radiator until coolant reaches the level of the filler neck.
6. Run the engine at fast idle with the radiator cap removed until the upper radiator hose is hot. (This shows that the thermostat is open and coolant is flowing through the system.) With the engine idling, add coolant to the radiator as required until it reaches the level of the overflow tube. Install the radiator cap by pushing down and rotating to the right until the "stop" is reached.

IMPORTANT: When cleaning cooling system do not use chemicals to loosen scale unless the cooling system is afterwards thoroughly reverse flushed, otherwise loosened scale may clog the radiator water passages. For complete removal of loose sediment and sludge from the radiator and engine water jacket, pressure flushing with an air and water gun is recommended. As this method of flushing requires special equipment we suggest you have this work carried out by your GMH dealer.

ENGINE DRIVE BELTS

The various engine drive belts should be kept at the correct tensions. A loose belt will wear more quickly and the resultant slipping does not allow the particular component viz; generator, cooling fan and water pump, air conditioning compressor, power steering pump or air pump to operate correctly. Premature failure of the cooling fan/water pump belt could result in a serious engine overheating problem.

Inspection and adjustment of drive belts should be carried out at the intervals specified in the Maintenance Plan, or as required to maintain correct operation at all times. If you have any doubts about servicing the engine drive belts yourself then have it done by a GMH Dealer. Replacement belts should be of the type specified for your vehicle.

AIR CLEANER

The air cleaner element is disposable and should be replaced as outlined in the Maintenance Plan. Do not wash or oil it or clean it with an air hose. If your vehicle operates in dusty conditions for any length of time the element should be replaced more often. Your GMH Dealer can advise you. When replacing the element, a genuine GMH replacement cleaner element is recommended.

When servicing the air cleaner on Electronic Fuel Injection engines:

— Handle air cleaner cover carefully (do not drop, hammer or immerse in water) as it contains the air flow meter.

— On reassembly, ensure the air flow meter wiring connection is reconnected properly and hose connections to the inlet duct are free of leaks as these items will affect air fuel ratio.

CAUTION: The air cleaner also functions as a flame arrestor in the event of engine backfire. The air cleaner should be installed at all times unless temporary removal is necessary for repair or maintenance. With the air cleaner removed, backfiring could cause fire in the engine compartment.

FUEL FILTER

The cartridge type fuel filters must be replaced (gauze filters where fitted are to be cleaned) at the intervals recommended in the Maintenance Plan. Ordinarily, replacement of the filter is not necessary before the recommended interval unless dirty fuel causes the element to clog.

All fuel filters (except EFI) are located in the engine compartment. The fuel filter on EFI engines is located on the rear underside of the vehicle.

When replacing the fuel filter on EFI engines there are several precautionary measures which must be observed. A detailed procedure for fuel filter replacement on EFI engines is given in the Service Manual.

When replacing filters use only Genuine Replacement Parts.

ENGINE VENTILATION FILTER

The engine ventilation (PCV) filter which is located inside the air cleaner cover should be replaced at intervals specified in Section 6B.

EVAPORATIVE CONTROL SYSTEM

At the intervals specified in Section 6B, check all the fuel and vapour lines for proper connections and correct routing as well as condition. Remove cannister and check for cracks or damage. Replace damaged or deteriorated parts as necessary. Replace filter in lower part of cannister.

BATTERY (12 VOLT)

The battery which is located in the engine compartment just behind the left side headlamp, has its Negative (—) terminal 'grounded'.

NOTE: Never disconnect the battery while the engine is running as this could cause damage to the vehicle's electrical components.

Whenever a battery charger is used always connect Positive (+) to Positive (+) and Negative (—) to Negative (—).

CAUTION: Follow the precautions listed in the 'jump starting' caution (see Section 3 of this manual) when working on or near a battery. Personal injury (particularly to eyes) or property damage may result from battery explosion, battery acid or electrical (short circuit) burns.

Care of your battery is very simple but extremely important. The battery installed will either be of the type that requires periodic topping up of the electrolyte or, will be of the maintenance-free type.

Low Maintenance Battery

This type of battery uses very little water. In normal service, check the level of electrolyte at one month intervals. At high temperatures, or if driving long distances at high speeds, check the level more frequently. Add distilled water as required to maintain the level of electrolyte between the bottom of the vent tube and up to a maximum of 5 mm below it. Do not overfill.

Maintenance-Free Battery

This type of battery is completely sealed except for some very small vent holes in its top. It has no filler caps and NEVER NEEDS TO BE TOPPED UP.

Both types of battery must be kept clean. Brush clean with diluted ammonia or baking soda solution and then flush off with clean water. Take care to prevent neutralizing solution from entering any cells.

Battery terminals should be made shiny with a wire brush or abrasive paper. Cover the terminals and clamps with a thin coating of petroleum jelly to help retard corrosion. To meet your car's power requirements it is recommended that when you need to replace your battery, you choose an AC-Delco battery of the type which is specified for your vehicle.

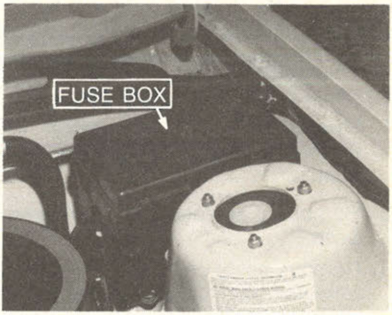
SPARK PLUGS

To maintain efficient engine operation, control exhaust emissions and achieve optimum fuel economy the spark plugs must always be in good firing condition.

If on inspection the plugs appear dirty, carefully scrape carbon and deposits off the electrodes with a suitable file. If the plugs appear badly burned or cracked or completely fouled then replace with new plugs. Before reinstalling any spark plug ensure that you check the gap with a feeler gauge. Refer to 'Specifications' Section 7 of this manual for correct plug gap.

When replacements are needed always use AC plugs of the type specified for your vehicle. These are available from your GMH Dealer.

FUSE SYSTEM



The fuses in the electrical system are contained in the fuse box located in the engine compartment, behind the passenger side strut tower. Access to the fuses is gained by removing the snap on cover.

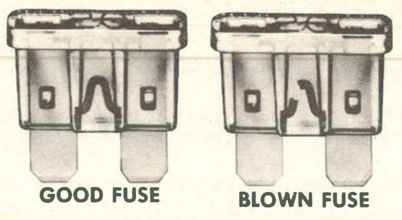
Fuses can be identified by referring to the fuse layout on the inside face of the fuse box cover.

For identification of fuse box components also refer to 'Specifications' Section 7 of this handbook.

Fuses used are of the blade type with the amperage value of each fuse moulded into its head. To determine whether or not a fuse is 'blown', it is necessary to remove the suspect fuse and examine the element in the fuse. If the element is broken (see illustration), replace the fuse with one of the same amperage value.

If after replacing a burnt-out fuse the new fuse also burns out, this indicates that the fuse is still overloaded. The cause of the fault should be located and rectified, preferably by a GMH Dealer.

CAUTION: When replacing a fuse be sure to use a fuse of the specified amperage. Never install a wire or similar device to replace a fuse as it could damage electrical components and may cause a fire hazard to the vehicle.



Fusible Link

The main wiring harnesses in your vehicle are protected from electrical overload by fusible links incorporated into the wiring system.

In case of a short circuit, the link will melt internally thus disconnecting the battery. The insulation encasing the fusible link is designed to withstand the extremely high temperatures generated in the fusing process thereby minimizing the risk of fire.

See your GMH Dealer if fusible link replacement becomes necessary.

BULB REPLACEMENT

Refer to 'Specifications' Section 7 of this handbook for correct specifications of replacement bulbs.

Headlights

NOTE: Do not touch bulbs or reflectors with bare hands. Greasy fingers will cause stains which evaporate — eventually resulting in a dull reflector.

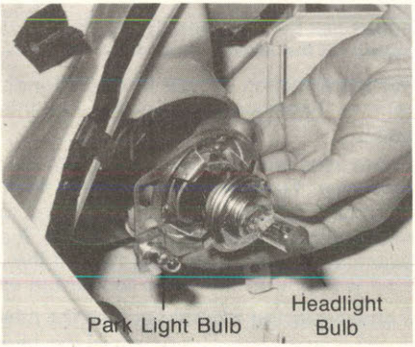
Grease spots on Halogen-bulbs will, within a short time, lead to bulb failure.

Inadvertently stained bulbs may be cleaned with tissue paper, or a clean, non-fuzzy cloth, using alcohol or white spirits.

Headlight aiming is a safety item and should be carried out by your GMH Dealer.

The procedure for replacing headlight high/low beam bulbs is as follows:—

1. Open engine hood and support. Remove protective plastic cover from rear of headlight.
2. Remove plug socket and wire from lamp base.
3. Remove cover cap by depressing against reflector and turning counter-clockwise. Withdraw bulb from reflector housing.
4. Insert new bulb so that the lug at the bulb holder is lining up with the reflector notch. Avoid touching the glass of the headlight globe as this drastically reduces the bulb life.
5. Reassemble in reverse sequence to removal.



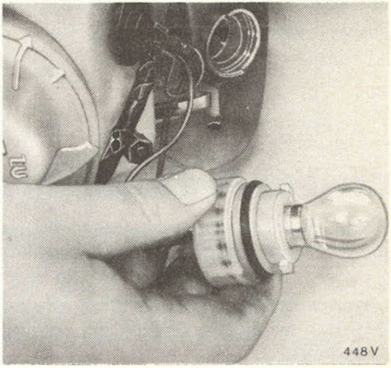
Parking Light

1. Remove cover cap by depressing against reflector, and turning counter-clockwise. Plug socket and wire will not have to be removed.

2. Remove parking light bulb by twisting it out of the cover cap.

3. Insert new bulb so that both base pins lock.

Reassemble in reverse sequence to removal.



Front Turn Signal Lights

1. The lamp socket is located in the engine compartment next to the headlight.

2. Slide back Dust Cover and twist lamp socket anticlockwise to remove.

3. Lightly depress bulb and remove in a twisting motion out of the socket.

Insert new bulb, and reassemble in reverse sequence to removal.

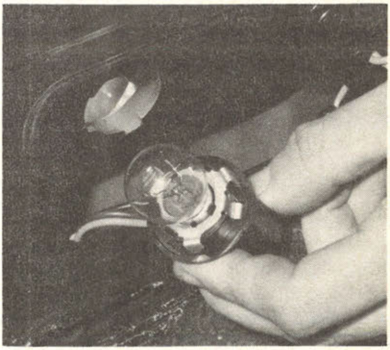
Rear Turn Signals, Stop and Tail Lights, Back-Up Lights — Sedan

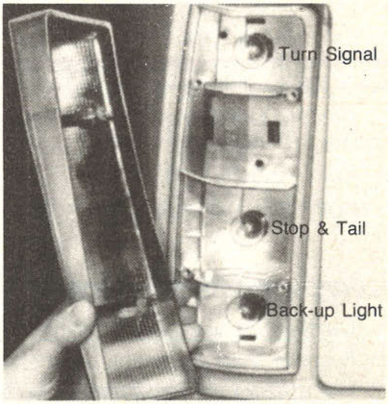
1. Remove the respective bulb socket from the lamp housing by twisting the socket. Bulb socket sequence from outside to inside is: Turn Signal; Stop/Tail; Stop/Tail; Back-up Light.

NOTE: To remove the left hand side Turn Signal socket and first Stop/Tail socket, you must depress the locking lever on the side of the socket before twisting the socket in an anticlockwise direction.

2. Depress bulb and rotate to remove from socket.

3. Insert new bulb and reassemble in reverse sequence to removal.





— Wagon

1. Unscrew the four cross-recess head screws and remove the lens.

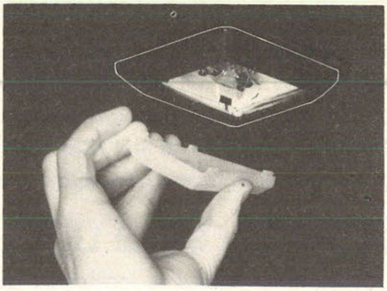
2. Slightly depress respective bulb and rotate to remove from socket.

Bulb socket sequence from the top downwards is: Turn Signal Light; Stop and Tail Light; Back-up Light.

3. Insert new bulb and reassemble in reverse sequence to removal.

Courtesy Light

To remove, gently squeeze together the long sides of the plastic lens (not the plastic surround) to gain access to the bulb. The bulb is of the festoon type and can be removed by pulling it straight out from its retaining clips.



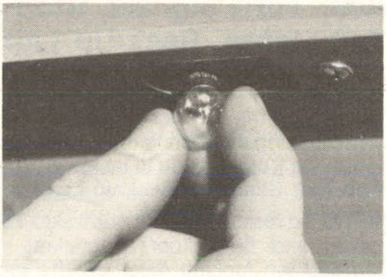
Courtesy/Reading Light (where fitted)

To replace the centre courtesy light bulb gently prise plastic lens away from housing. The festoon type bulb can then be replaced.

To replace the reading light bulb the chrome plated housing must first be removed by unscrewing the 2 screws. The reading lamp bulbs can then be removed by depressing and then twisting anticlockwise. Insert new bulb and then reassemble in reverse sequence to removal.

Licence Plate Light — Sedan

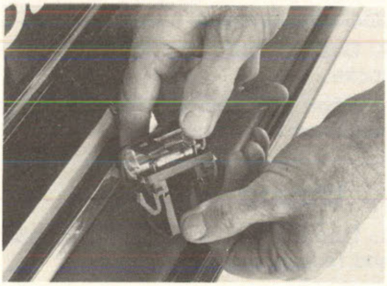
1. Remove bulb from socket by turning anticlockwise.
2. Insert new bulb by turning clockwise.



Licence Plate Light — Wagon

(2 Places)

1. To remove lamp from bumper, release spring on the right using a screwdriver and ease lamp out by moving upwards.
2. Depress protruding tongue and remove lamp socket from housing.
3. Remove bulb from holder.
4. Insert new bulb and replace holder.



Luggage Compartment Light

1. Carefully prise plastic housing away from body using a screw driver.
2. Remove bulb from clips by applying slight pressure towards clips.
3. Insert new bulb and proceed in reverse sequence to removal.

Engine Compartment and Glove Box Lights

Procedure for replacing the festoon type bulbs is similar to that for replacing luggage compartment light.

Rear Reading Light (where fitted)

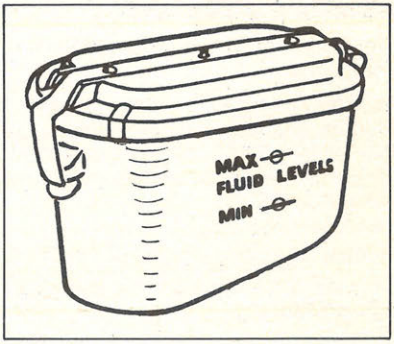
Similar to above procedure for luggage compartment bulb replacement.

Instrument Panel and Console Lamps

Replacement of these bulbs is recommended to be done only by a GMH Dealer or another competent person as all wiring and associated attachments are prone to damage if not serviced correctly.

BRAKE MASTER CYLINDER

The fluid level in the master cylinder should be checked regularly in conjunction with checking the oil and coolant levels. The fluid level visible through the 'see through' reservoir should be maintained between the MIN and MAX level markings. If the fluid is between these levels do not remove the master cylinder cap. Remember that brake fluid exposed to the atmosphere will quickly absorb moisture which in turn lowers the performance of the fluid as well as increasing risk of corrosion of brake components.



If the master cylinder requires constant topping up it could indicate that a malfunction exists in which case it should immediately be brought to the attention of your GMH dealer.

Every 2 years the brake hydraulic system must be drained, flushed and refilled with specified grade of brake fluid from a new freshly opened container.

Refer to fluid/lubricant chart in Section 7 for specification of brake fluid.

WINDSHIELD WASHER RESERVOIR

A plastic reservoir containing liquid for the windshield washer is mounted in the engine compartment, just behind the right hand side front strut tower. It is suggested that when checking the coolant level in the recovery reservoir, the washer reservoir be checked also. For a crystal clear view, Optikleen Washer Solvent (Part Number M37068) can be used by adding from the graduated container, the recommended proportion.

TAILGATE WASHER RESERVOIR

A plastic reservoir containing liquid for the rear window washer is located in the load compartment in the spare wheel well. You should top up this reservoir with Optikleen at the same time you are servicing the front windshield reservoir.

TYRES

CAUTION: To reduce the risk of loss of vehicle control and personal injury:

- **The tyres must be properly inflated at all times. (Refer to tyre placard inside glove compartment.)**
- **Your vehicle must not be overloaded. (Refer to Vehicle Mass Chart in Section 2 of this handbook.)**
- **Ensure that your tyres are always in good condition, particularly when the vehicle is used for consistent high speed operation.**
- **Observe all other cautions and Safety Information contained in the rest of this 'Tyres' section.**

Vehicle Loading

Do not load your vehicle beyond the vehicle axle load limits shown in Vehicle Mass Chart in Section 2 of this handbook.

Inflation Pressure

The cold inflation pressures listed on the Tyre Placard should be used for all vehicle loading conditions.

Incorrect tyre inflation pressures can have adverse effects on tyre life and vehicle performance. Too low an air pressure causes increased tyre flexing with subsequent heat build up. This weakens the tyre and increases the chance of damage or failure. It can result in tyre overloading, abnormal tyre wear, adverse vehicle handling, and increased fuel consumption.

Too high an air pressure can result in abnormal wear, harsh ride and can increase the chance of damage from road hazards.

Observe the following recommendations for checking and maintaining correct tyre inflation pressure:

1. Tyre pressures should be checked when the tyres are cold (when the vehicle has been standing for three hours or more or has been driven less than 2 kilometres).
2. Tyre inflation pressure may increase as much as 30 kPa (4 psi) or more when the tyres become hot from driving. DO NOT reduce pressures to compensate for this buildup. As a guide for checking warm/hot tyres under all conditions, allow pressure to read 10% above that recommended.
3. It is recommended that the pressures are checked at least weekly. For constant long distance or rough road travelling daily checking is recommended.

   To maximise the protection of tyres on vehicles operating for prolonged times over rough roads (particularly in outback conditions) it is recommended that the cold tyre inflation pressure recommended for high speed operation at maximum load condition as shown on the tyre placard is used.
4. Do not forget the spare tyre. It is advisable to maintain the spare at the maximum recommended tyre inflation pressure listed on the placard.
5. Always use a tyre pressure gauge when checking inflation pressures (we suggest you purchase a quality pocket-type gauge). Simply looking at the tyres to check inflation

pressures is not enough, especially with radial tyres. If the inflation pressure on a tyre is often low have the fault rectified as soon as possible.

6. Be sure to put the valve dust caps or extensions back on, if so equipped. This will help keep dirt and moisture from getting into the valve core which could cause a leak.

Tyre Inspection and Rotation

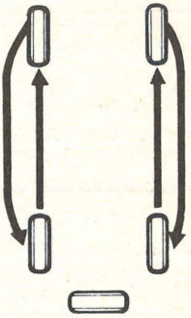
Front and rear tyres perform different jobs and can wear differently depending on the types of roads driven, your driving habits, wheel alignment and balance, tyre pressures etc.

For longer tyre life, you should have the tyres inspected, and rotated if required, at the intervals specified in the GMH Maintenance Plan.

Your GMH Dealer will be able to diagnose any unusual signs of wear and can also balance the wheels and tyres for you. If the tyres are rotated, it is recommended that the balance be checked at the same time.

Refer to illustration for the preferred way of rotating your tyres. If no abnormal or uneven wear is evident, tyres need not be rotated.

RADIAL TYRE ROTATION



Alignment and Balance

Improper wheel alignment can cause the tyres to wear faster and to wear unevenly. It can also cause the car to 'pull' to the left or right.

Out-of-balance wheels and tyres can cause annoying vibration and uneven tyre wear such as cupping and flat spots.

If you have any reason to suspect that either of the above problems exists then have a wheel alignment and balance check done by your GMH Dealer.

Tyre Replacement and Repair

CAUTION: Do not mix different tyre construction types, such as radial and cross ply, on your vehicle except in emergencies, because your car's handling could be affected and may result in loss of control.

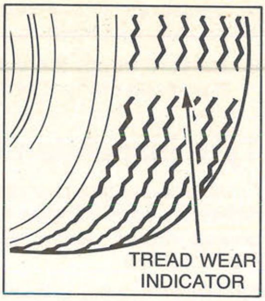
When replacing tyres you should use the same size, load rating and construction type as the original tyres on your car. Refer to tyre placard inside glove box for tyre size and load rating. Using a different size or type of tyre may affect such things as ride, handling, speedometer/odometer calibration, vehicle ground clearance and tyre or tyre chain clearance to the body or chassis.

Tyres with a higher speed rating and/or with a maximum load rating in excess of that listed in the tyre placard for tyre size listed are also acceptable as replacements provided they are fitted to a suitable rim size.

New tyres should be fitted in pairs to the front. If replacing only one tyre, it should be paired on the same axle with the least worn of the other three.

You should replace your tyres when:

1. The tyres are worn to the point where the tread indicators appear or the cord or fabric is showing. The original equipment tyres fitted to your vehicle incorporate built-in tread wear indicators which assist in determining when the tyres have worn to the point of needing replacement. (See illustration) In the interests of safety, replacement should not be delayed.
2. The tread or sidewall is cut, split, or cracked deep enough to expose the cord or fabric.
3. The tyre has a bump or bulge in it, indicating some kind of internal damage.
4. The tyre has a puncture, cut or other damage which can't be repaired because of the size or location of the damage.



If in doubt about the extent of damage to the tyre have it removed from the wheel and examined by a tyre specialist.

If a pressure loss occurs while driving, do not attempt to drive on the deflated tyre more than is necessary to stop safely. Driving even a short distance on a deflated tyre can damage it and the wheel beyond repair.

When an object which has punctured the tyre is removed, repairs are to be made in accordance with the tyre manufacturer's recommendations.

CAUTION: Tyres which have been repaired or retreaded will not be able to be operated safely at high speeds therefore their use is not recommended under these driving conditions.

Wheel Replacement

When replacing wheels for any reason, ensure that the new wheels are equivalent in diameter, rim width, offset and mounting configuration to those originally installed in your car.

NOTE: Replacing your factory fitted wheels and tyres with non specified wheels and tyres may void your new vehicle warranty as well as your motor vehicle insurance policy.

Tyre Traction

CAUTION: A decrease in driving, cornering and braking traction occurs when water, snow, ice, gravel or other material is on the road surface. Driving practices and vehicle speed should be adjusted to the road conditions.

When driving on wet or slushy roads, it is possible for a wedge of water to build up between the tyre and road surface. This phenomenon, known as hydro-planing, may cause partial or complete loss of traction, which adversely affects vehicle control and stopping ability. To reduce the possibility of traction loss, the following precautions should be observed.

1. Reduce speed levels during rainstorms or when roads are slushy and if the road has standing water or puddles.
2. Replace tyres when tread wear indicators are visible.
3. Check that tyres are properly inflated for speed range and vehicle loading.

Heavy Treads

Caution must be exercised when using tyres with heavy treads, including tyres designed to gain traction in bad weather conditions. At sustained high speeds, this type of tyre will run at higher temperatures than standard tyres and consequently should only be operated within the limits recommended by the manufacturer.

Any doubts concerning the fitness of the tyres on your vehicle for the purpose you require should be referred to your GMH Dealer, who will be pleased to advise.

COMPRESSION TESTING E.F.I. ENGINE

When carrying out compression tests or whenever cranking the engine with spark plug(s) removed you should always remove the fuel injection control relay from the fuse box. This is done to prevent fuel from being automatically injected into the cylinder while cranking.

SECTION 6B

GMH MAINTENANCE PLAN AND SERVICE COUPONS

This section contains all the Owner Inspections and Services and Scheduled Maintenance Services which are considered necessary for your vehicle. Safety, economy, emission control, performance and reliability cannot be assured unless regular maintenance is performed, preferably by factory-trained technicians.

OWNER'S RESPONSIBILITY — PLEASE READ CAREFULLY

It is the owner's responsibility to ensure that all routine and scheduled maintenance services described in this section are carried out at the recommended intervals.

The recommended intervals are only for vehicles subject to normal operating conditions. Vehicles subject to extreme operating conditions will need more frequent servicing on some items as described under "Vehicle Operating Conditions" later in this section.

NOTE: All maintenance services as listed in this handbook and replacement of service items are the responsibility of the owner and as such are NOT considered, under the provisions of the new vehicle warranty to be rectification of defects in material and workmanship. Items such as wheel alignment, necessary adjustments to drive belts, transmission, clutch, parking brake etc. or any other items which may require servicing due to fair wear and tear will be carried out at the owner's cost.

Failure to have proper maintenance services carried out by an Authorised GMH Dealer or Service Dealer may void your new vehicle warranty.

It is strongly recommended that you read the "New Vehicle Warranty" at the front of this handbook, so that you are conversant with your entitlements.

OWNER INSPECTIONS AND SERVICES

Listed below are vehicle inspections and services which should be performed by either you or a qualified technician at the frequencies indicated to help ensure proper safety and dependability of your vehicle. Take any problems promptly to your dealer or a qualified technician for service advice. Whenever repairs are necessary, have them completed at once. For your safety and that of others, any safety-related components that could have been damaged in an accident should be inspected. All needed repairs should be performed before operating your vehicle.

FREQUENCY	INSPECTION OR SERVICE	WHAT TO DO
BEFORE OPERATING YOUR CAR	Glass, mirrors, light and reflector condition	Look for broken, scratched, dirty or damaged glass, mirror, light or reflector that could reduce vision or visibility or cause injury. Replace, clean or repair promptly.
	Seat adjuster operation	When adjusting seat position, be sure seat adjusters latch by pushing seat forward and backward.
	Rearview mirror and sun visor operation.	Make sure friction joints hold mirrors and sun visors in place.
	Door, luggage compartment lid and wagon tailgate operation.	Make sure that all doors, luggage compartment lid or wagon tailgate close, latch and lock tightly.
	Warning lights and instruments.	Check operation of all warning lights and instruments. See Section 1E for details.
WHILE OPERATING YOUR CAR	Automatic transmission shift indicator operation.	Make sure the indicator points to the gear chosen.
	Wiper and washer operation	Note the operation and condition of the wiper blades and the flow and aim of the washer spray. This includes the rear window wiper and washer if so equipped.
	Ventilation, Heating and/or Air Conditioning System operation	Check that system operates as described in in Section 1E. Pay particular attention to windscreen demisting operation.
	Horn Operation	Blow the horn occasionally to make sure it works.
	Brake system operation	Be alert to abnormal sounds, increased brake pedal travel or repeated pulling to one side when braking. Also, if the brake warning light comes on, something may be wrong. See "Brake Warning Light" in Section 1E.

FREQUENCY	INSPECTION OR SERVICE	WHAT TO DO
	Exhaust system operation	Be alert to any changes in the sound of the system or any smell of fumes. These are signs the system may be leaking or overheating. Have it inspected and repaired at once. Also see ''Engine Exhaust Gas Caution (Carbon Monoxide)'' in Section 2.
	Tyres, Wheels and Alignment	Be alert to a vibration of the steering wheel or seat at normal highway speeds. This may mean a wheel balance is needed. Also, a pull right or left on a straight, level road may show the need for a tyre pressure adjustment or wheel alignment.
	Steering system operation	Be alert to changes in steering action. An inspection is needed when the steering wheel is harder to turn or has too much free play or if unusual sounds are noted when turning or parking.
	Headlight aim	Take note of light pattern occasionally. If beams seem improperly aimed, or if oncoming cars frequently flash their headlights at you, have your headlight aim checked.
AT REFUELLING STOPS	Engine oil level†	Check level and add if necessary. See Section 6A for details.
	Engine coolant level†	Check level in coolant recovery reservoir and radiator. Add specified coolant as required. See Section 6A for details.
	Brake master cylinder reservoir level†	Check fluid level. Note: A low fluid level can indicate worn disc brake pads and these should be checked.
	Automatic transmission fluid level†	Maintain level within operating range on dipstick.
	Power steering system level†	Maintain level in accordance with instructions given in Section 6A.
	Battery electrolyte level	Check level and add if necessary. If your vehicle is fitted with a 'Maintenance Free' battery you do not have to check electrolyte level. See Section 6A.
	Windshield washer fluid level	Check level in container and add if necessary.

FREQUENCY	INSPECTION OR SERVICE	WHAT TO DO
	Hood latch operation	When operating hood note the operation of secondary latch. It should keep hood from opening all the way when primary latch is released. Make sure that hood closes firmly after services are performed.
	Tyre pressures	Maintain pressures as shown on the tyre placard located in the glove compartment. Don't forget the spare! Pressures should be checked when tyres are cold.
	†**NOTE:** A large loss in these systems may indicate a problem. Have them inspected and repaired at once. — Topping up is required when fluid levels fall to the "add" or minimum markings. — Use only the specified lubricants and fluids. See Section 7 'specifications'.	
AT LEAST MONTHLY	Tyre and wheel inspection	Check tyres for abnormal wear or damage. Also check for damaged wheels. Replace as necessary. Abnormal tyre wear (front) indicates a wheel alignment may be required.
	Light operation	Check operation of license plate light, headlights including high beams, parking lights, taillights, brake lights, turn signals, backup lights and hazard warning flashers.
	Fluid leak checks	Periodically, after the car has been parked for a while, inspect the surface beneath the car for water, oil, fuel or other fluids. Water dripping from the air conditioning system after use is normal. If you notice fuel leaks or fumes, the cause should be found and corrected at once.
	Seat belts condition and operation	Inspect belt system, including webbing condition, buckle operation, retractor operation and anchor security.

VEHICLE OPERATING CONDITIONS

The frequency with which your vehicle requires maintenance servicing depends upon what type of conditions it is operated under.

Normal Conditions

The maintenance instructions contained in this handbook are based on the assumption that your car will be used as designed in accordance with the operating instructions given in this handbook:

- To carry passengers and cargo within the limitations specified in the Vehicle Mass Chart in Section 2 of this manual.
- On reasonable road surfaces within legal operating limits.
- On a daily basis, as a general rule, for at least several kilometres and,
- On correct grade fuel.

Extreme Conditions

If your vehicle operates under any of the extreme conditions listed in the following table it is recommended that some items be serviced more frequently than the intervals specified in the Maintenance Plan.

No.	CONDITION
1.	Dust, dirt, loose road material.
2.	Muddy and wet areas.
3.	Cold weather (below 5°C) and when most trips are less than 5 km.
4.	Stop-start, excessive idling or low speed operation as experienced in inner city driving. e.g. taxi, door to door delivery vehicles.
5.	Caravan or trailer towing.
6.	Extended heavy load high speed operation in temperatures above 35°C (EFI engines only).

The following table lists those items that are recommended to be serviced more frequently for the particular extreme operating conditions experienced.

ITEM	EXTREME OPERATING CONDITIONS	SUGGESTED SERVICE INTERVALS FOR CONTINUOUS OPERATION UNDER EXTREME CONDITIONS
ENGINE OIL	1-3-4-6	CHANGE @ 5,000 km
ENGINE OIL FILTER	1	REPLACE @ 5,000 km
ENGINE AIR CLEANER ELEMENT	1	REPLACE @ 20,000 km
AUTOMATIC TRANSMISSION FLUID	4, 5	CHANGE @ 20,000 km
FRONT SUSPENSION, STEERING COMPONENTS	1-2	INSPECT FOR DAMAGE, WEAR, LEAKS. LUBRICATE SUSPENSION BALL JOINTS @ 5,000 km
REAR DRUM BRAKES	1-2-4-5	REMOVE DRUMS, CLEAN & INSPECT @ 10,000 km
REAR DISC-PARKING BRAKE	1-2	INSPECT & CLEAN LININGS @ 20,000 km

NOTE: The extra services listed above should only be used continuously if your vehicle operates continuously under the conditions specified.

If you operate under any of these conditions on a one off basis e.g. holiday trip, then the extra service should be for that period only.

As a guide, if you operate continually for a period of one month or 1,500 kilometres under any of the extreme conditions, then this could qualify for additional services.

If at any time it is considered that the above items or other items should be more frequently serviced due to the type of operation or before a long trip, discuss the situation with the service manager of your GMH Dealer.

SERVICE COUPON SYSTEM

The remainder of this section contains a separate coupon for each of the scheduled maintenance services recommended for vehicles operating under normal conditions. Printed on each coupon is a list of all the items requiring attention for that particular service. As each service is performed and the coupon removed, the following service coupon is readily visible to remind you when the next service is due.

What The Owner Should Do

When service, according to the time or distance interval, is due, the owner should present this Owner Handbook to a GMH Dealer as an authority to have the items listed attended to. Any additional services required should be noted on the front of the coupon and then signed by you as authorisation to carry out the service.

After the service is completed, the owner should see that the Validation Record is stamped and signed by the Dealer. This is important as it will not only assist in the determination of Warranty Claims, but enhance the value of the vehicle whenever resale is contemplated.

What The Servicing Dealer Has To Do

Your Service Dealer must attend to all items listed for the particular service and must see that the Validation Record is signed.

All operations listed on the Service Coupons should be carried out following the procedures set out in the appropriate current service literature.

Total Maintenance Programme

Service Coupons provided in this handbook range from the Pre-Delivery Service on your new vehicle right through to the 125,000 km (75 month) service. The sequence of services is as follows:

- Pre Delivery Service

  NOTE: All the following services are to be performed at the specified Distance or Months, whichever occurs first.

- 1,500 km — 1 Month
- 5,000 km — 3 Months
- 15,000 km — 9 Months
- 25,000 km — 15 Months
- 35,000 km — 21 Months
- 45,000 km — 27 Months
- 55,000 km — 33 Months
- 65,000 km — 39 Months
- 75,000 km — 45 Months
- 85,000 km — 51 Months
- 95,000 km — 57 Months
- 105,000 km — 63 Months
- 115,000 km — 69 Months
- 125,000 km — 75 Months

> The one month — 1,500 kilometres service will be performed without cost for labour by the Selling Dealer.
>
> This service may be carried out by another GMH Dealer provided you have a letter of Introduction from the Selling Dealer. Your Dealer will supply the necessary letter of Introduction upon request.

The services shown in this schedule between 15,000 km and 125,000 km are to be performed after 125,000 km at the same intervals.

MAINTENANCE SCHEDULE

This schedule is based on Normal Operating Conditions.

If your vehicle operates in Extreme Conditions those items marked ★ will need servicing more frequently. Refer 'Vehicle Operating Conditions' in this section.

SERVICE INTERVAL	**x 1000 km**	**5**	**15**	**25**	**35**	**45**	**55**	**65**	**75**	**85**	**95**	**105**	**115**	**125**
(use odometer reading or months whichever occurs first)	**or months**	**3**	**9**	**15**	**21**	**27**	**33**	**39**	**45**	**51**	**57**	**63**	**69**	**75**
UNDERHOOD OPERATIONS														
Change engine oil, check level.★		x	x	x	x	x	x	x	x	x	x	x	x	x
Change oil filter.★		x	x	x	x	x	x	x	x	x	x	x	x	x
Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.		-	x	x	x	x	x	x	x	x	x	x	x	x
Check condition and tension of all engine drive belts using gauge. Adjust if necessary.		-	x	-	x	-	x	-	x	-	x	-	x	-
Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.		-	x	x	x	x	x	x	x	x	x	x	x	x
Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).		-	x	x	x	x	x	x	x	x	x	x	x	x
Drain, flush and refill cooling system with premixed coolant comprising water and recommended inhibitor. Inspect hoses and clamps. Clean outside of radiator and A/C condensor (where fitted).		-	x	-	x	-	x	-	x	-	x	-	x	-
Pressure test cooling system and radiator cap.		x	x	x	x	x	x	x	x	x	x	x	x	x
Air conditioning — check refrigerant charge at sight glass.		-	x	-	x	-	x	-	x	-	x	-	x	-
Check operation of EFE system (except EFI).		-	x	-	x	-	x	-	x	-	x	-	x	-
Check operation of throttle positioner/adjust engine speed if required (except EFI).		-	x	-	x	-	x	-	x	-	x	-	x	-
Check air preheat control damper assembly for correct cold and hot operation (except EFI).		-	x	-	x	-	x	-	x	-	x	-	x	-
Check operation of idle stop solenoids (except EFI).		-	x	-	x	-	x	-	x	-	x	-	x	-
Check operation of idle load compensator valve (EFI with air cond.) (L4 with power steering).		-	x	-	x	-	x	-	x	-	x	-	x	-
Check operation of automatic choke (except EFI).		-	x	-	x	-	x	-	x	-	x	-	x	-
Check operation of auxiliary air valve (EFI only).		-	x	-	x	-	x	-	x	-	x	-	x	-
Clean EGR valve and manifold opening. Check operation.		-	x	-	x	-	x	-	x	-	x	-	x	-
Remove throttle body, clean throttle blade and bore of body (EFI only).		-	-	-	x	-	-	-	x	-	-	-	x	-
Check PCV valve for correct operation. Replace as required.		-	-	-	x	-	-	-	x	-	-	-	x	-
Replace PCV filter located in air cleaner.		-	-	-	x	-	-	-	x	-	-	-	x	-
Replace engine air cleaner element.★		-	-	-	x	-	-	-	x	-	-	-	x	-
Clean or replace carburettor fuel filter as necessary.		-	x	-	x	-	x	-	x	-	x	-	x	-

SERVICE INTERVAL **x 1000 km**	**5**	**15**	**25**	**35**	**45**	**55**	**65**	**75**	**85**	**95**	**105**	**115**	**125**
(Use odometer reading or months whichever occurs first) **or months**	**3**	**9**	**15**	**21**	**27**	**33**	**39**	**45**	**51**	**57**	**63**	**69**	**75**
Replace in line fuel filter (except EFI).	-	-	-	x	-	-	-	x	-	-	-	x	-
Lubricate distributor, inspect condition of cap and rotor. Replace spark plugs, check resistance of plug leads, replace contact points (L4 only), check ingition timing.	-	x	-	x	-	x	-	x	-	x	-	x	-
Check engine idle speed and fast idle speed on choke cam. Adjust if necessary (except EFI).	-	x	-	x	-	x	-	x	-	x	-	x	-
Check engine idle speed and adjust if necessary (EFI only).	-	x	x	x	x	x	x	x	x	x	x	x	x
Replace evap. emissions canister filter.	-	-	-	-	x	-	-	-	x	-	-	-	x
UNDER VEHICLE OPERATIONS													
Replace fuel filter (EFI only).	-	-	-	x	-	-	-	x	-	-	-	x	-
Manual transmission. Check oil level.	-	x	-	x	-	x	-	x	-	x	-	x	-
Manual transmission. Check for leaks.	-	x	x	x	x	x	x	x	x	x	x	x	x
Manual transmission. Change oil (M76 only).	-	-	-	x	-	-	-	x	-	-	-	x	-
Rear axle. Check oil level.	-	x	-	x	-	x	-	x	-	x	-	x	-
Rear axle. Check for leaks.	-	x	x	x	x	x	x	x	x	x	x	x	x
Auto transmission service. Drain and refill with fluid. Adjust band and replace filter.★	-	-	-	x	-	-	-	x	-	-	-	x	-
Inspect CV joint for grease loss or damage.	-	x	x	x	x	x	x	x	x	x	x	x	x
Lubricate transmission shift and clutch linkages (where fitted).★	-	-	x	-	x	-	x	-	x	-	x	-	x
Lubricate front suspension control arm ball joints.★	-	-	x	-	x	-	x	-	x	-	x	-	x
Steering and Suspension inspection: Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.★	-	x	x	x	x	x	x	x	x	x	x	x	x
Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.	-	x	x	x	x	x	x	x	x	x	x	x	x
Check all brake and fuel lines, hoses and connections for condition, attachment and routing.	-	x	x	x	x	x	x	x	x	x	x	x	x
Front wheel bearings. Repack and adjust.★	-	-	x	-	-	-	x	-	-	-	x	-	-
Inspect disc brake pads for wear and discs for surface condition.★ FRONT	-	x	x	x	x	x	x	x	x	x	x	x	x
Inspect disc brake pads for wear and discs for surface condition (if fitted).★ REAR	-	x	x	x	x	x	x	x	x	x	x	x	x
Remove rear drums, check linings for wear inspect drums, wheel cylinders. Check operation of self adjusters. Clean components as necessary.★	-	-	x	-	x	-	x	-	x	-	x	-	x

SERVICE INTERVAL (Use odometer reading or months whichever occurs first) **x 1000 km**	**5**	**15**	**25**	**35**	**45**	**55**	**65**	**75**	**85**	**95**	**105**	**115**	**125**
or months	**3**	**9**	**15**	**21**	**27**	**33**	**39**	**45**	**51**	**57**	**63**	**69**	**75**
Parking brake inspection — rear disc brakes. Check linings and drum for wear.★	-	-	-	x	-	-	-	x	-	-	-	x	-
Hydraulic brake system — drain and refill with specified fluid. Bleed system. Check brake performance.	-	-	-	x	-	-	-	x	-	-	-	x	-
Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.	x	x	x	x	x	x	x	x	x	x	x	x	x
INTERIOR VEHICLE OPERATIONS													
Check park brake operation. Adjust if necessary.	-	x	x	x	x	x	x	x	x	x	x	x	x
Check clutch pedal height. Adjust if necessary.	-	x	x	x	x	x	x	x	x	x	x	x	x
Seat belt inspection — examine webbing condition, buckle operation and retractor mechanism operation. Report any deficiencies.	-	x	-	x	-	x	-	x	-	x	-	x	x
EXTERIOR VEHICLE OPERATIONS													
Lubricate exterior door handle pivots, door and rear compartment strikers and hold open devices. Check and lubricate hood lock and catch.	-	x	-	x	-	x	-	x	-	x	-	x	-
Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.	-	x	x	x	x	x	x	x	x	x	x	x	x
ROAD TEST													
Check vehicle on road for braking performance, steering operation, engine response, transmission operation. Check operation of cruise control (where fitted). Check park pawl operation (auto). Check neutral start switch (auto). Correct and report any abnormal conditions.	x	x	x	x	x	x	x	x	x	x	x	x	x
Suggested Labour Time — Hours	0.5	1.8	1.5	2.9	1.2	1.8	1.5	2.9	1.2	1.8	1.5	2.9	1.2
Extra Labour Time for:													
Automatic Transmission	-	-	-	0.6	-	-	-	0.6	-	-	-	0.6	-
Rear Disc Brake	-	0.2	0.2	0.8	0.2	0.2	0.2	0.8	0.2	0.2	0.2	.0.8	0.2
V8 Engine	-	0.5	-	0.5	-	0.5	-	0.5	-	0.5	-	0.5	-
Sunroof	-	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2

Additions to Basic Service

Additional time and material required for servicing equipment other than that fitted to a base model vehicle (viz: six cylinder, manual transmission, rear drum brakes) and repairing or replacing any part found faulty during the service check and inspection, will be added to the Suggested Labour Time and charges.

Where any deficiencies are noted, such items should be reported to the owner/operator so that the extra work required can be authorised.

NEW VEHICLE PRE DELIVERY VALIDATION

Your new vehicle has been inspected and prepared for delivery by your Dealer, in accordance with the manufacturer's New Vehicle Pre-Delivery Procedures.

Service Manager's Signature ....

Date ....

Pre-Delivery Operations

Check and adjust or correct if necessary, the following items:

GMH QUALITY SERVICE & PARTS

UNDERHOOD OPERATIONS

- ☐ Check all fluid levels viz: brake master cylinder, windscreen washer reservoir, battery electrolyte, automatic transmission, power steering reservoir.
- ☐ Check coolant level, check for presence of inhibitor. Top up radiator and recovery reservoir as required.
- ☐ Check condition, attachment and routing of all hoses and pipes in engine compartment: includes brake, coolant, fuel, power steering, emission control systems and air conditioning.
- ☐ Check condition and tension of all engine drive belts.
- ☐ Check battery earth and harness earth connections to engine and frame for security. Check battery terminals are tight on battery posts.
- ☐ Check refrigerant charge at sight glass.
- ☐ Inspection condition of air cleaner element.

UNDER VEHICLE OPERATIONS

- ☐ Check oil levels in manual transmission and rear axle.
- ☐ Check for oil, fuel, water and exhaust leaks.
- ☐ Check brake lines, hoses and connections for condition, attachment and routing.
- ☐ Check exhaust system for condition, attachment and alignment.
- ☐ Check fuel and vapour lines, hoses and connections for condition, attachment and routing.
- ☐ Check steering system for damaged or loose components.
- ☐ Check front and rear suspension for damaged or loose components.
- ☐ Inspect tyres and inflate to recommended pressures.
- ☐ Tighten wheel nuts to specified torque.
- ☐ Check front wheel toe, adjust if necessary.

INTERIOR VEHICLE OPERATIONS

- ☐ Check park brake operation, adjust if necessary.
- ☐ Check clutch pedal height and adjust.
- ☐ Check operation of all vehicle controls, including door, rear compartment and window mechanisms, warning indicators, switches, ignition steering lock, electrical systems, hood lock and catch.
- ☐ Check operation of all lights.
- ☐ Check that heating, ventilation, demisting and air conditioning systems operate correctly and controls are correctly adjusted. Check that blower operates on each speed setting.
- ☐ Examine seat belts, examine webbing, buckle and retractor mechanism operation, report any deficiency.
- ☐ Inspect body trim and floor coverings.
- ☐ Clean vehicle interior thoroughly.
- ☐ Check tool, jack and spare wheel stowage.
- ☐ Check front seats fore and aft adjustment.
- ☐ Check wagon rear seat operation.
- ☐ Check vertical height seat adjuster operation.

EXTERIOR VEHICLE OPERATIONS

- ☐ Wash vehicle, check paintwork, brush touch-up and minor repairs as necessary.

ROAD TEST

- ☐ Check vehicle on road for braking performance, steering operation, engine response. Correct and report abnormal conditions.
- ☐ Check for squeaks, rattles, wind noise and powertrain noise.
- ☐ Vehicles fitted with Automatic Transmission — check shift pattern. Manual Transmission — check gearshift operation and clutch control pedal height.
- ☐ Check park pawl operation (auto).
- ☐ Check neutral start switch operation (auto).
- ☐ Check steering wheel spoke position.

Delivery Certificate

The dealer has completed the vehicle identification certificate, and has explained to the purchaser the terms and conditions of the General Motors-Holden's Sales Pty. Ltd., new vehicle warranty and notices and the contents of the owner's handbook. The dealer has informed the purchaser of his responsibility in respect of vehicle maintenance.

The dealer has demonstrated to the purchaser the operation of the vehicle and of all options and accessories.

The purchaser has been informed in writing of the fitting of any and all equipment or accessories not marketed by GMH or an affiliated company, and of any alterations or modifications which have been made to the vehicle and the effect on the GMH Sales Pty. Ltd. new vehicle warranty of such fitting, alteration or modification.

The purchaser has inspected the vehicle and acknowledges its delivery in accordance with this delivery procedure.

Purchaser's Signature .... Date ....

Delivered by: Signature .... Date ....

Owner's Name Mr. Mrs. Miss ....

Address ....

Town & State .... Postcode ....

Reg. No. .... Model Name ....

V.I.N. .... Eng. No. ....

1500 Kilometre 1 Month Inspection and Adjustment

This vehicle has been thoroughly checked in accordance with the **1** month — **1,500** kilometre inspection and adjustment.

Dealer ....

Service Manager's Signature ....

Date .... Odometer Reading ....

1500 Kilometre or 1 Month Inspection and Adjustment

GMH QUALITY SERVICE & PARTS

This coupon should not be removed until the vehicle is presented for service.

Owner's Name Mr. Mrs. Miss ....

Address ....

Town & State .... Postcode ....

Reg. No. .... Model Name ....

V.I.N. .... Eng. No. ....

Selling Dealer's Stamp & Signature ....

Date of Acquisition ....

This vehicle has been thoroughly checked in accordance with the schedule on the reverse side of this coupon.

Servicing Dealer ....

Town .... State ....

Owner's Signature ....

This Inspection & Adjustment will be carried out without charge to the owner except for any lubricants used.

The Designated Services are not to be exceeded without the Owner's prior agreement to additional servicing charges.

UNDER HOOD OPERATIONS

☐ Check oil level.
☐ Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
☐ Check condition and tension of all engine drive belts using gauge. Adjust if necessary.
☐ Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
☐ Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
☐ Pressure test cooling system and radiator cap.
☐ Air conditioning — check refrigerant charge at sight glass.
☐ Check operation of EFE system (except EFI).
☐ Check operation of throttle positioner/adjust engine speed if required (except EFI).
☐ Check air preheat control damper assembly for correct cold and hot operation (except EFI).
☐ Check operation of idle stop solenoids (except EFI).
☐ Check operation of idle load compensator valve (EFI with air cond.) (L4 with power steering).
☐ Check operation of automatic choke (except EFI).
☐ Check operation of auxiliary air valve (EFI only).
☐ Check PCV valve for correct operation. Replace as required.
☐ Check ignition timing.
☐ Check engine idle speed and fast idle speed on choke cam. Adjust if necessary (except EFI).
☐ Check engine idle speed and adjust if necessary (EFI only).

UNDER VEHICLE OPERATIONS

☐ Manual transmission. Check oil level.
☐ Manual transmission. Check for leaks.
☐ Rear axle. Check oil level.
☐ Rear axle. Check for leaks.
☐ Lubricate front suspension control arm ball joints.
☐ Steering and suspension inspection:
Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.
☐ Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.
☐ Check all brake and fuel lines, hoses and connections for condition, attachment and routing.
☐ Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.
☐ Check torque of rear suspension links attaching bolts.

INTERIOR VEHICLE OPERATIONS

☐ Check operation of all lights (interior and exterior).
☐ Check operation of all instruments and controls including ignition steering lock, indicator and warning lights, horn, wiper/washer, turn signals, hood lock and catch. Check operation of door, rear compartment and window mechanisms.
☐ Check that heating, ventilation, demisting and air conditioning systems operate correctly. Check that blower operates on each speed setting.

EXTERIOR VEHICLE OPERATIONS

☐ Check headlamp aim and adjust if necessary.

ROAD TEST

☐ Check vehicle on road for braking performance, steering operation, engine response, transmission operation.
Check operation of cruise control (where fitted).
Check park pawl operation (auto).
Check neutral start switch (auto).
Correct and report any abnormal conditions.

5,000 km or 3 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 0.5 hr.

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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Signature .... Date ....

UNDER HOOD OPERATIONS

☐	Change engine oil, check level.
☐	Change oil filter.
☐	Pressure test cooling system and radiator cap.

UNDER VEHICLE OPERATIONS

☐	Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.

ROAD TEST

☐	Check vehicle on road for braking performance, steering operation, engine response, transmission operation. Check operation of cruise control (where fitted). Check park pawl operation (auto). Check neutral start switch (auto). Correct and report any abnormal conditions.

5,000 km
or 3 Month
SERVICE
VALIDATION

Servicing Dealer ....

Date of Service ....

Odometer ....

Signed ....

Additional Services Performed:

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15,000 km or 9 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 1.8 hrs.

[Add 0.2 hr for Rear Disc Brakes.
0.5 hr for V8 engine tune.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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Signature .... Date ....

UNDER HOOD OPERATIONS

☐	Change engine oil, check level.
☐	Change oil filter.
☐	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
☐	Check condition and tension of all engine drive belts using gauge. Adjust if necessary.
☐	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
☐	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
☐	Drain, flush and refill cooling system with premixed coolant comprising water and recommended inhibitor. Inspect hoses and clamps. Clean outside of radiator and A/C condensor (where fitted).
☐	Pressure test cooling system and radiator cap.
☐	Air conditioning — check refrigerant charge at sight glass.
☐	Check operation of EFE system (except EFI).
☐	Check operation of throttle positioner/adjust engine speed if required (except EFI).
☐	Check air preheat control damper assembly for correct cold and hot operation (except EFI).
☐	Check operation of idle stop solenoids (except EFI).
☐	Check operation of idle load compensator valve (EFI with air cond.) (L4 with power steering).
☐	Check operation of automatic choke (except EFI).
☐	Check operation of auxiliary air valve (EFI only).
☐	Clean EGR valve and manifold opening. Check operation.
☐	Clean or replace carburettor fuel filter as necessary.
☐	Lubricate distributor, inspect condition of cap and rotor. Replace spark plugs, check resistance of plug leads, replace contact points (L4 only), check ignition timing.

15,000 km or 9 Month SERVICE VALIDATION

Servicing Dealer ....

Date of Service ....

Odometer ....

Signed ....

Additional Services Performed: ....

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	Check engine idle speed and fast idle speed on choke cam. Adjust if necessary (except EFI).
	Check engine idle speed and adjust if necessary (EFI only).

UNDER VEHICLE OPERATIONS

	Manual transmission. Check oil level.
	Manual transmission. Check for leaks.
	Rear axle. Check oil level.
	Rear axle. Check for leaks.
	Inspect CV joint for grease loss or damage.
	Steering and Suspension inspection: Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.
	Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.
	Check all brake and fuel lines, hoses and connections for condition, attachment and routing.
	Inspect disc brake pads for wear and discs for surface condition. FRONT Inspect disc brake pads for wear and discs for surface condition (if fitted). REAR
	Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.

INTERIOR VEHICLE OPERATIONS

	Check park brake operation. Adjust if necessary.
	Check clutch pedal height. Adjust if necessary.
	Seat belt inspection — examine webbing condition, buckle operation and retractor mechanism operation. Report any deficiencies.

EXTERIOR VEHICLE OPERATIONS

	Lubricate exterior door handle pivots, door and rear compartment strikers and hold open devices. Check and lubricate hood lock and catch.
	Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

	Check vehicle on road for braking performance, steering operation, engine response, transmission operation. Check operation of cruise control (where fitted). Check park pawl operation (auto). Check neutral start switch (auto). Correct and report any abnormal conditions.

25,000 km or 15 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 1.5 hrs.

[Add 0.2 hr for Rear Disc Brakes.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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Signature .... Date ....

UNDER HOOD OPERATIONS

☐	Change engine oil, check level.
☐	Change oil filter.
☐	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
☐	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
☐	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
☐	Pressure test cooling system and radiator cap.
☐	Check engine idle speed and adjust if necessary (EFI only).

UNDER VEHICLE OPERATIONS

☐	Manual transmission. Check for leaks.
☐	Rear axle. Check for leaks.
☐	Inspect CV joint for grease loss or damage.
☐	Lubricate transmission shift and clutch linkages (where fitted).
☐	Lubricate front suspension control arm ball joints.
☐	Steering and Suspension inspection: Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.
☐	Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.
☐	Check all brake and fuel lines, hoses and connections for condition, attachment and routing.
☐	Front wheel bearings. Repack and adjust.

25,000 km or 15 Month SERVICE VALIDATION

Servicing Dealer ....

Date of Service ....

Odometer ....

Signed ....

Additional Services Performed: ....

☐	Inspect disc brake pads for wear and discs for surface condition. FRONT Inspect disc brake pads for wear and discs for surface condition (if fitted). REAR	✓
☐	Remove rear drums, check linings for wear, inspect drums, wheel cylinders. Check operation of self adjusters. Clean components as necessary.	
☐	Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.	

INTERIOR VEHICLE OPERATIONS

☐	Check park brake operation. Adjust if necessary.
☐	Check clutch pedal height. Adjust if necessary.

EXTERIOR VEHICLE OPERATIONS

☐	Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

☐	Check vehicle on road for braking performance, steering operation, engine response, transmission operation. Check operation of cruise control (where fitted). Check park pawl operation (auto). Check neutral start switch (auto). Correct and report any abnormal conditions.	✓

35,000 km or 21 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 2.9 hrs.

[Add 0.6 hr for Automatic Transmission.
0.8 hr for Rear Disc Brakes.
0.5 hr for V8 engine tune.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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Signature .... Date ....

UNDER HOOD OPERATIONS

	Change engine oil, check level.
	Change oil filter.
	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
	Check condition and tension of all engine drive belts using gauge. Adjust if necessary.
	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
	Drain, flush and refill cooling system with premixed coolant comprising water and recommended inhibitor. Inspect hoses and clamps. Clean outside of radiator and A/C condensor (where fitted).
	Pressure test cooling system and radiator cap.
	Air conditioning — check refrigerant charge at sight glass.
	Check operation of EFE system (except EFI).
	Check operation of throttle positioner/adjust engine speed if required (except EFI).
	Check air preheat control damper assembly for correct cold and hot operation (except EFI).
	Check operation of idle stop solenoids (except EFI).
	Check operation of idle load compensator valve (EFI with air cond.) (L4 with power steering).
	Check operation of automatic choke (except EFI).
	Check operation of auxiliary air valve (EFI only).
	Clean EGR valve and manifold opening. Check operation.
	Remove throttle body, clean throttle blade and bore of body (EFI only).
	Check PCV valve for correct operation. Replace as required.

35,000 km or 21 Month SERVICE VALIDATION

Servicing Dealer ....

Date of Service ....

Odometer ....

Signed ....

Additional Services Performed: ....

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☐ Replace PCV filter located in air cleaner.

☐ Replace engine air cleaner element.

☐ Clean or replace carburettor fuel filter as necessary.

☐ Replace in line fuel filter (except EFI).

☐ Lubricate distributor, inspect condition of cap and rotor. Replace spark plugs, check resistance of plug leads, replace contact points (L4 only), check ignition timing.

☐ Check engine idle speed and fast idle speed on choke cam. Adjust if necessary (except EFI).

☐ Check engine idle speed and adjust if necessary (EFI only).

UNDER VEHICLE OPERATIONS

☐ Replace fuel filter (EFI only).

☐ Manual transmission. Check oil level.

☐ Manual transmission. Check for leaks.

☐ Manual transmission. Change oil (M76 only).

☐ Rear axle. Check oil level.

☐ Rear axle. Check for leaks.

☐ Auto transmission service. Drain and refill with fluid. Adjust band and replace filter.

☐ Inspect CV joint for grease loss or damage.

☐ Steering and Suspension inspection:
Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.

☐ Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.

☐ Check all brake and fuel lines, hoses and connections for condition, attachment and routing.

☐ Inspect disc brake pads for wear and discs for surface condition. FRONT
Inspect disc brake pads for wear and discs for surface condition (if fitted). REAR

☐ Parking brake inspection — rear disc brakes. Check linings and drum for wear.

☐ Hydraulic brake system — drain and refill with specified brake fluid. Bleed system. Check brake performance.

☐ Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.

INTERIOR VEHICLE OPERATIONS

☐ Check park brake operation. Adjust if necessary.

☐ Check clutch pedal height. Adjust if necessary.

☐ Seat belt inspection — examine webbing condition, buckle operation and retractor mechanism operation. Report any deficiencies.

EXTERIOR VEHICLE OPERATIONS

☐ Lubricate exterior door handle pivots, door and rear compartment strikers and hold open devices. Check and lubricate hood lock and catch.

☐ Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

☐ Check vehicle on road for braking performance, steering operation, engine response, transmission operation.
Check operation of cruise control (where fitted).
Check park pawl operation (auto).
Check neutral start switch (auto).
Correct and report any abnormal conditions.

45,000 km or 27 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 1.2 hrs.

[Add 0.2 hr for Rear Disc Brakes.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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Signature . . . . Date . . . .

UNDER HOOD OPERATIONS

☐	Change engine oil, check level.
☐	Change oil filter.
☐	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
☐	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
☐	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
☐	Pressure test cooling system and radiator cap.
☐	Check engine idle speed and adjust if necessary (EFI only).
☐	Replace evap. emissions canister filter.

UNDER VEHICLE OPERATIONS

☐	Manual transmission. Check for leaks.
☐	Rear axle. Check for leaks.
☐	Inspect CV joint for grease loss or damage.
☐	Lubricate transmission shift and clutch linkages (where fitted).
☐	Lubricate front suspension control arm ball joints.
☐	Steering and Suspension inspection: Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.
☐	Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.
☐	Check all brake and fuel lines, hoses and connections for condition, attachment and routing.

45,000 km or 27 Month SERVICE VALIDATION

Servicing Dealer . . . .

Date of Service . . . .

Odometer . . . .

Signed . . . .

Additional Services Performed: . . . .

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	Inspect disc brake pads for wear and discs for surface condition. FRONT Inspect disc brake pads for wear and discs for surface condition (if fitted). REAR
	Remove rear drums, check linings for wear, inspect drums, wheel cylinders. Check operation of self adjusters. Clean components as necessary.
	Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.

INTERIOR VEHICLE OPERATIONS

	Check park brake operation. Adjust if necessary.
	Check clutch pedal height. Adjust if necessary.

EXTERIOR VEHICLE OPERATIONS

	Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

	Check vehicle on road for braking performance, steering operation, engine response, transmission operation. Check operation of cruise control (where fitted). Check park pawl operation (auto). Check neutral start switch (auto). Correct and report any abnormal conditions.

55,000 km or 33 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 1.8 hrs.

[Add 0.2 hr for Rear Disc Brakes.
0.5 hr for V8 engine tune.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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Signature .... Date ....

UNDER HOOD OPERATIONS

☐	Change engine oil, check level.
☐	Change oil filter.
☐	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
☐	Check condition and tension of all engine drive belts using gauge. Adjust if necessary.
☐	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
☐	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
☐	Drain, flush and refill cooling system with premixed coolant comprising water and recommended inhibitor. Inspect hoses and clamps. Clean outside of radiator and A/C condensor (where fitted).
☐	Pressure test cooling system and radiator cap.
☐	Air conditioning — check refrigerant charge at sight glass.
☐	Check operation of EFE system (except EFI).
☐	Check operation of throttle positioner/adjust engine speed if required (except EFI).
☐	Check air preheat control damper assembly for correct cold and hot operation (except EFI).
☐	Check operation of idle stop solenoids (except EFI).
☐	Check operation of idle load compensator valve (EFI with air cond.) (L4 with power steering).
☐	Check operation of automatic choke (except EFI).
☐	Check operation of auxiliary air valve (EFI only).
☐	Clean EGR valve and manifold opening. Check operation.
☐	Clean or replace carburettor fuel filter as necessary.
☐	Lubricate distributor, inspect condition of cap and rotor. Replace spark plugs, check resistance of plug leads, replace contact points (L4 only), check ignition timing.

Additional Services Performed:

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55,000 km or 33 Month SERVICE VALIDATION

Servicing Dealer ....

Date of Service ....

Odometer ....

Signed ....

☐ Check engine idle speed and fast idle speed on choke cam. Adjust if necessary (except EFI).

☐ Check engine idle speed and adjust if necessary (EFI only).

UNDER VEHICLE OPERATIONS

☐ Manual transmission. Check oil level.

☐ Manual transmission. Check for leaks.

☐ Rear axle. Check oil level.

☐ Rear axle. Check for leaks.

☐ Inspect CV joint for grease loss or damage.

☐ Steering and Suspension inspection:
Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.

☐ Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.

☐ Check all brake and fuel lines, hoses and connections for condition, attachment and routing.

☐ Inspect disc brake pads for wear and discs for surface condition. FRONT
Inspect disc brake pads for wear and discs for surface condition (if fitted). REAR

☐ Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.

INTERIOR VEHICLE OPERATIONS

☐ Check park brake operation. Adjust if necessary.

☐ Check clutch pedal height. Adjust if necessary.

☐ Seat belt inspection — examine webbing condition, buckle operation and retractor mechanism operation. Report any deficiencies.

EXTERIOR VEHICLE OPERATIONS

☐ Lubricate exterior door handle pivots, door and rear compartment strikers and hold open devices. Check and lubricate hood lock and catch.

☐ Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

☐ Check vehicle on road for braking performance, steering operation, engine response, transmission operation.
Check operation of cruise control (where fitted).
Check park pawl operation (auto).
Check neutral start switch (auto).
Correct and report any abnormal conditions.

65,000 km or 39 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 1.5 hrs.

[Add 0.2 hr for Rear Disc Brakes.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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Signature . . . . Date . . . .

UNDER HOOD OPERATIONS

☐	Change engine oil, check level.
☐	Change oil filter.
☐	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
☐	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
☐	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
☐	Pressure test cooling system and radiator cap.
☐	Check engine idle speed and adjust if necessary (EFI only).

UNDER VEHICLE OPERATIONS

☐	Manual transmission. Check for leaks.
☐	Rear axle. Check for leaks.
☐	Inspect CV joint for grease loss or damage.
☐	Lubricate transmission shift and clutch linkages (where fitted).
☐	Lubricate front suspension control arm ball joints.
☐	Steering and Suspension inspection: Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.
☐	Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.
☐	Check all brake and fuel lines, hoses and connections for condition, attachment and routing.
☐	Front wheel bearings. Repack and adjust.

65,000 km or 39 Month SERVICE VALIDATION

Servicing Dealer . . . .

Date of Service . . . .

Odometer . . . .

Signed . . . .

Additional Services Performed: . . . .

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	Inspect disc brake pads for wear and discs for surface condition. Inspect disc brake pads for wear and discs for surface condition (if fitted).	FRONT REAR
	Remove rear drums, check linings for wear, inspect drums, wheel cylinders. Check operation of self adjusters. Clean components as necessary.	
	Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.	

INTERIOR VEHICLE OPERATIONS

	Check park brake operation. Adjust if necessary.
	Check clutch pedal height. Adjust if necessary.

EXTERIOR VEHICLE OPERATIONS

	Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

	Check vehicle on road for braking performance, steering operation, engine response, transmission operation. Check operation of cruise control (where fitted). Check park pawl operation (auto). Check neutral start switch (auto). Correct and report any abnormal conditions.

75,000 km or 45 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 2.9 hrs.

[Add 0.6 hr for Automatic Transmission.
0.8 hr for Rear Disc Brakes.
0.5 hr for V8 engine tune.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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Signature . . . . Date . . . .

UNDER HOOD OPERATIONS

	Change engine oil, check level.
	Change oil filter.
	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
	Check condition and tension of all engine drive belts using gauge. Adjust if necessary.
	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
	Drain, flush and refill cooling system with premixed coolant comprising water and recommended inhibitor. Inspect hoses and clamps. Clean outside of radiator and A/C condensor (where fitted).
	Pressure test cooling system and radiator cap.
	Air conditioning — check refrigerant charge at sight glass.
	Check operation of EFE system (except EFI).
	Check operation of throttle positioner/adjust engine speed if required (except EFI).
	Check air preheat control damper assembly for correct cold and hot operation (except EFI).
	Check operation of idle stop solenoids (except EFI).
	Check operation of idle load compensator valve (EFI with air cond.) (L4 with power steering).
	Check operation of automatic choke (except EFI).
	Check operation of auxiliary air valve (EFI only).
	Clean EGR valve and manifold opening. Check operation.
	Remove throttle body, clean throttle blade and bore of body (EFI only).
	Check PCV valve for correct operation. Replace as required.

75,000 km or 45 Month SERVICE VALIDATION

Servicing Dealer . . . .
Date of Service . . . .
Odometer . . . .
Signed . . . .

Additional Services Performed:
. . . .
. . . .
. . . .

	Replace PCV filter located in air cleaner.
	Replace engine air cleaner element.
	Clean or replace carburettor fuel filter as necessary.
	Replace in line fuel filter (except EFI).
	Lubricate distributor, inspect condition of cap and rotor. Replace spark plugs, check resistance of plug leads, replace contact points (L4 only), check ignition timing.
	Check engine idle speed and fast idle speed on choke cam. Adjust if necessary (except EFI).
	Check engine idle speed and adjust if necessary (EFI only).

UNDER VEHICLE OPERATIONS

	Replace fuel filter (EFI only).
	Manual transmission. Check oil level.
	Manual transmission. Check for leaks.
	Manual transmission. Change oil (M76 only).
	Rear axle. Check oil level.
	Rear axle. Check for leaks.
	Auto transmission service. Drain and refill with fluid. Adjust band and replace filter.
	Inspect CV joint for grease loss or damage.
	Steering and Suspension inspection: Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.
	Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.
	Check all brake and fuel lines, hoses and connections for condition, attachment and routing.
	Inspect disc brake pads for wear and discs for surface condition. FRONT Inspect disc brake pads for wear and discs for surface condition (if fitted). REAR
	Parking brake inspection — rear disc brakes. Check linings and drum for wear.
	Hydraulic brake system — drain and refill with specified brake fluid. Bleed system. Check brake performance.
	Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.

INTERIOR VEHICLE OPERATIONS

	Check park brake operation. Adjust if necessary.
	Check clutch pedal height. Adjust if necessary.
	Seat belt inspection — examine webbing condition, buckle operation and retractor mechanism operation. Report any deficiencies.

EXTERIOR VEHICLE OPERATIONS

	Lubricate exterior door handle pivots, door and rear compartment strikers and hold open devices. Check and lubricate hood lock and catch.
	Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

	Check vehicle on road for braking performance, steering operation, engine response, transmission operation. Check operation of cruise control (where fitted). Check park pawl operation (auto). Check neutral start switch (auto). Correct and report any abnormal conditions.

85,000 km or 51 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 1.2 hrs.

[Add 0.2 hr for Rear Disc Brakes.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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. . . .

. . . .

. . . .

Signature . . . . Date . . . .

UNDER HOOD OPERATIONS

☐	Change engine oil, check level.
☐	Change oil filter.
☐	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
☐	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
☐	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
☐	Pressure test cooling system and radiator cap.
☐	Check engine idle speed and adjust if necessary (EFI only).
☐	Replace evap. emissions canister filter.

UNDER VEHICLE OPERATIONS

☐	Manual transmission. Check for leaks.
☐	Rear axle. Check for leaks.
☐	Inspect CV joint for grease loss or damage.
☐	Lubricate transmission shift and clutch linkages (where fitted).
☐	Lubricate front suspension control arm ball joints.
☐	Steering and Suspension inspection: Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.
☐	Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.
☐	Check all brake and fuel lines, hoses and connections for condition, attachment and routing.

85,000 km or 51 Month SERVICE VALIDATION

Servicing Dealer . . . .

Date of Service . . . .

Odometer . . . .

Signed . . . .

Additional Services Performed: . . . .

	Check engine idle speed and fast idle speed on choke cam. Adjust if necessary (except EFI).
	Check engine idle speed and adjust if necessary (EFI only).

UNDER VEHICLE OPERATIONS

	Manual transmission. Check oil level.
	Manual transmission. Check for leaks.
	Rear axle. Check oil level.
	Rear axle. Check for leaks.
	Inspect CV joint for grease loss or damage.
	Steering and Suspension inspection: Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.
	Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.
	Check all brake and fuel lines, hoses and connections for condition, attachment and routing.
	Inspect disc brake pads for wear and discs for surface condition. FRONT Inspect disc brake pads for wear and discs for surface condition (if fitted). REAR
	Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.

INTERIOR VEHICLE OPERATIONS

	Check park brake operation. Adjust if necessary.
	Check clutch pedal height. Adjust if necessary.
	Seat belt inspection — examine webbing condition, buckle operation and retractor mechanism operation. Report any deficiencies.

EXTERIOR VEHICLE OPERATIONS

	Lubricate exterior door handle pivots, door and rear compartment strikers and hold open devices. Check and lubricate hood lock and catch.
	Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

	Check vehicle on road for braking performance, steering operation, engine response, transmission operation. Check operation of cruise control (where fitted). Check park pawl operation (auto). Check neutral start switch (auto). Correct and report any abnormal conditions.

105,000 km or 63 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 1.5 hrs.

[Add 0.2 hr for Rear Disc Brakes.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

....

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....

....

Signature .... Date ....

UNDER HOOD OPERATIONS

☐	Change engine oil, check level.
☐	Change oil filter.
☐	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
☐	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
☐	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
☐	Pressure test cooling system and radiator cap.
☐	Check engine idle speed and adjust if necessary (EFI only).

UNDER VEHICLE OPERATIONS

☐	Manual transmission. Check for leaks.
☐	Rear axle. Check for leaks.
☐	Inspect CV joint for grease loss or damage.
☐	Lubricate transmission shift and clutch linkages (where fitted).
☐	Lubricate front suspension control arm ball joints.
☐	Steering and Suspension inspection: Inspect front and rear suspension and steering system for damaged, loose or missing parts, signs of wear or lack of lubrication. Inspect power steering lines and hoses for condition, attachment and routing, leaks etc. Check condition of all rubber boots and covers.
☐	Inspect exhaust system and underbody near the exhaust system. Look for damaged, missing or out-of-position parts as well as open seams, holes, loose connections or other conditions which could cause a heat build up in the floor pan or could let exhaust fumes seep into the passenger compartment.
☐	Check all brake and fuel lines, hoses and connections for condition, attachment and routing.
☐	Front wheel bearings. Repack and adjust.

105,000 km or 63 Month SERVICE VALIDATION

Servicing Dealer ....

Date of Service ....

Odometer ....

Signed ....

Additional Services Performed: ....

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....

☐ Inspect disc brake pads for wear and discs for surface condition. FRONT
Inspect disc brake pads for wear and discs for surface condition (if fitted). REAR

☐ Remove rear drums, check linings for wear, inspect drums, wheel cylinders. Check operation of self adjusters. Clean components as necessary.

☐ Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.

INTERIOR VEHICLE OPERATIONS

☐ Check park brake operation. Adjust if necessary.

☐ Check clutch pedal height. Adjust if necessary.

EXTERIOR VEHICLE OPERATIONS

☐ Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

☐ Check vehicle on road for braking performance, steering operation, engine response, transmission operation.
Check operation of cruise control (where fitted).
Check park pawl operation (auto).
Check neutral start switch (auto).
Correct and report any abnormal conditions.

115,000 km or 69 Months Service Coupon

GMH QUALITY SERVICE & PARTS

I authorise performance of the services specified on this coupon. I understand that I will be charged for this work which will take approx. 2.9 hrs.

[Add 0.6 hr for Automatic Transmission.
0.8 hr for Rear Disc Brakes.
0.5 hr for V8 engine tune.
0.2 hr for Sunroof.]

There will also be a charge for all lubricants and filters, parts used as a result of checks and additional services performed as requested.

Additional Services Requested:

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....

Signature .... Date ....

UNDER HOOD OPERATIONS

☐	Change engine oil, check level.
☐	Change oil filter.
☐	Check all fluid levels viz, brake, coolant, washer, battery, auto trans, power steering. Top up as required.
☐	Check condition and tension of all engine drive belts using gauge. Adjust if necessary.
☐	Check condition, attachment and routing of all hoses and pipes in engine compartment. Includes brake, fuel, coolant, air conditioning and emission control systems.
☐	Check condition and attachment of all air ducts between air cleaner and inlet manifold (EFI only).
☐	Drain, flush and refill cooling system with premixed coolant comprising water and recommended inhibitor. Inspect hoses and clamps. Clean outside of radiator and A/C condensor (where fitted).
☐	Pressure test cooling system and radiator cap.
☐	Air conditioning — check refrigerant charge at sight glass.
☐	Check operation of EFE system (except EFI).
☐	Check operation of throttle positioner/adjust engine speed if required (except EFI).
☐	Check air preheat control damper assembly for correct cold and hot operation (except EFI).
☐	Check operation of idle stop solenoids (except EFI).
☐	Check operation of idle load compensator valve (EFI with air cond.) (L4 with power steering).
☐	Check operation of automatic choke (except EFI).
☐	Check operation of auxiliary air valve (EFI only).
☐	Clean EGR valve and manifold opening. Check operation.
☐	Remove throttle body, clean throttle blade and bore of body (EFI only).
☐	Check PCV valve for correct operation. Replace as required.

115,000 km or 69 Month SERVICE VALIDATION

Servicing Dealer ....

Date of Service ....

Odometer ....

Signed ....

Additional Services Performed:

....

....

....

☐ Inspect disc brake pads for wear and discs for surface condition. FRONT
Inspect disc brake pads for wear and discs for surface condition (if fitted). REAR

☐ Remove rear drums, check linings for wear, inspect drums, wheel cylinders. Check operation of self adjusters. Clean components as necessary.

☐ Inspect tyres for irregular wear or damage. Also check for damaged wheels and advise owner of any corrective maintenance required. Check inflation pressures and torque wheel nuts.

INTERIOR VEHICLE OPERATIONS

☐ Check park brake operation. Adjust if necessary.

☐ Check clutch pedal height. Adjust if necessary.

EXTERIOR VEHICLE OPERATIONS

☐ Sunroof (where fitted) — clean and lubricate slide tracks. Check that drain holes are free from obstruction.

ROAD TEST

☐ Check vehicle on road for braking performance, steering operation, engine response, transmission operation.
Check operation of cruise control (where fitted).
Check park pawl operation (auto).
Check neutral start switch (auto).
Correct and report any abnormal conditions.

To ensure continued interest in your vehicle, GMH requests that owners who change their name or address, or subsequent owners who purchase the vehicle, fill in and mail one of the attached notices. Please forward to the address shown on the reverse side of the notice.

NOTICE OF NAME/ADDRESS OWNERSHIP CHANGE

NAME/ADDRESS CHANGE ☐ SUBSEQUENT OWNER ☐
PLEASE TICK ☑ APPROPRIATE SQUARE

Mr.
Owner's Mrs. ....
Name Miss

Address ....

Town ....

State .... Postcode ....

Registration No. ....

Vehicle Identification
Number (V.I.N.) ....

(Refer Specifications Section of this Manual for location of V.I.N.)

NOTICE OF NAME/ADDRESS OWNERSHIP CHANGE

NAME/ADDRESS CHANGE ☐ SUBSEQUENT OWNER ☐
PLEASE TICK ☑ APPROPRIATE SQUARE

Mr.
Owner's Mrs. ....
Name Miss

Address ....

Town ....

State .... Postcode ....

Registration No. ....

Vehicle Identification
Number (V.I.N.) ....

(Refer Specifications Section of this Manual for location of V.I.N.)

Place in an envelope and mail to:

The Manager — Warranty Administration,
Service Department,
General Motors-Holden's Sales Pty. Limited,
Box 548D, G.P.O.,
Melbourne,
Victoria. 3001.

Place in an envelope and mail to:

The Manager — Warranty Administration,
Service Department,
General Motors-Holden's Sales Pty. Limited,
Box 548D, G.P.O.,
Melbourne,
Victoria. 3001.

To ensure continued interest in your vehicle, GMH requests that owners who change their name or address, or subsequent owners who purchase the vehicle, fill in and mail one of the attached notices. Please forward to the address shown on the reverse side of the notice.

NOTICE OF NAME/ADDRESS OWNERSHIP CHANGE

NAME/ADDRESS CHANGE ☐ SUBSEQUENT OWNER ☐
PLEASE TICK ☑ APPROPRIATE SQUARE

Mr.
Owner's Mrs. ....
Name Miss

Address ....

Town ....

State .... Postcode ....

Registration No. ....

Vehicle Identification
Number (V.I.N.) ....

(Refer Specifications Section of this Manual for location of V.I.N.)

NOTICE OF NAME/ADDRESS OWNERSHIP CHANGE

NAME/ADDRESS CHANGE ☐ SUBSEQUENT OWNER ☐
PLEASE TICK ☑ APPROPRIATE SQUARE

Mr.
Owner's Mrs. ....
Name Miss

Address ....

Town ....

State .... Postcode ....

Registration No. ....

Vehicle Identification
Number (V.I.N.) ....

(Refer Specifications Section of this Manual for location of V.I.N.)

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General Motors-Holden's Sales Pty. Limited,
Box 548D, G.P.O.,
Melbourne,
Victoria. 3001.

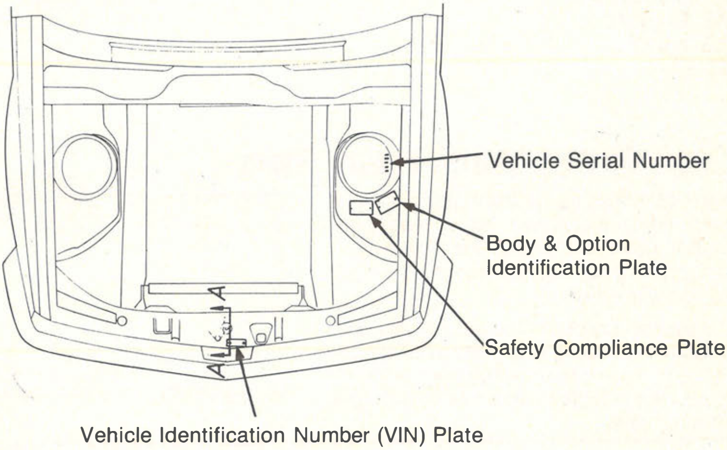
SECTION 7

SPECIFICATIONS AND EMISSION CONTROL SYSTEMS

These specifications are given here for information only. Before using them, see the Cautions and other instructions throughout this manual — the index may help you locate such items. For more information, see the service manual covering the chassis or body part in question. If in doubt about any item ask your GMH Dealer.

IDENTIFICATION NUMBERS AND PLATES

There are several identification numbers and plates on your vehicle that you should be familiar with. The illustration shows the location of most of these items.

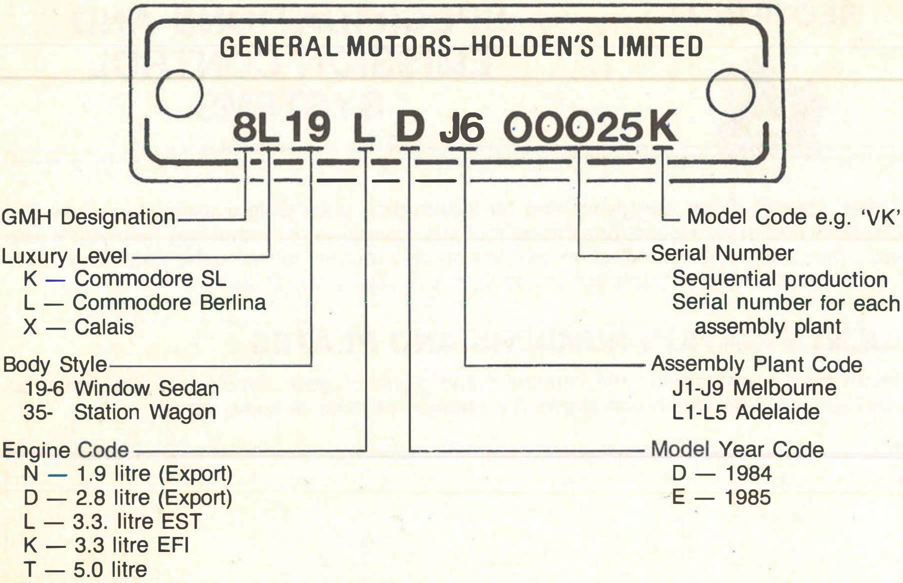

Vehicle Serial Number
Body & Option Identification Plate
Safety Compliance Plate
Vehicle Identification Number (VIN) Plate

Vehicle Identification Number (V.I.N.) Plate

This plate is attached to the top centre of the radiator support panel under the engine hood. The number appearing on this plate completely identifies the vehicle in one coded series of characters.

The significance of these characters or blocks of characters is explained below using an example identification number.

NOTE: The V.I.N. should be recorded on the Vehicle Identification Certificate on the inside of the front cover of this handbook.



GMH Designation

Luxury Level
- K — Commodore SL
- L — Commodore Berlina
- X — Calais

Body Style
- 19-6 Window Sedan
- 35- Station Wagon

Engine Code
- N — 1.9 litre (Export)
- D — 2.8 litre (Export)
- L — 3.3. litre EST
- K — 3.3 litre EFI
- T — 5.0 litre

Model Code e.g. 'VK'

Serial Number
Sequential production
Serial number for each
assembly plant

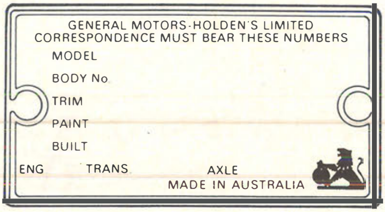
Assembly Plant Code
- J1-J9 Melbourne
- L1-L5 Adelaide

Model Year Code
- D — 1984
- E — 1985

Body and Option Identification Plate

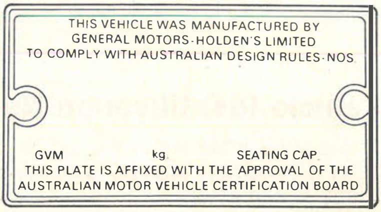
This plate is attached to the front of the left side strut tower. The plate shows body style, body serial number, paint and trim colour combination, paint number, engine, transmissions, axle ratio options and built date.

The built date is defined as "the date of manufacture" by calendar month and year in which the body shell and power train sub-assemblies are co-joined and the vehicle is driven or moved from the production line.


GENERAL MOTORS-HOLDEN'S LIMITED
CORRESPONDENCE MUST BEAR THESE NUMBERS
MODEL
BODY No
TRIM
PAINT
BUILT
ENG TRANS AXLE
MADE IN AUSTRALIA

Safety Compliance Plate

This plate is attached to the front of the left side strut tower. Shown on the plate are the vehicle Make, Model Name and Style, Month and Year of Manufacture, Vehicle Serial Number, approved seating capacity and the Australian Design Rules with which the vehicle complies.


THIS VEHICLE WAS MANUFACTURED BY
GENERAL MOTORS-HOLDEN'S LIMITED
TO COMPLY WITH AUSTRALIAN DESIGN RULES-NOS
GVM kg SEATING CAP
THIS PLATE IS AFFIXED WITH THE APPROVAL OF THE
AUSTRALIAN MOTOR VEHICLE CERTIFICATION BOARD

Vehicle Serial Number

(Chassis Number)

This number is stamped into the top surface of the left side front suspension strut tower.

Engine Numbers

Every engine has its own individual identification number stamped into a flat surface on the engine block. The prefix denotes the size and type of engine viz:

Four cylinder VN — 1.9 litre
Six cylinder VD — 2.8 litre
Six cylinder VL — 3.3 litre E.S.T.
Six cylinder VK — 3.3 litre E.F.I.

Stamped on a pad above the engine mounting on the right hand side (driver's side) of the engine.

Eight cylinder VT — 5.0 litre

Stamped on a pad on the left hand side (passenger's side) at the front of the cylinder block above the engine mounting.

Model Identification

Model Range	Model Group	Style* Number	V.I.N. Code Number
Commodore SL Sedan	8VK	19	8K19
Commodore SL Wagon	8VK	35	8K35
Commodore Berlina Sedan	8VL	19	8L19
Commodore Berlina Wagon	8VL	35	8L35
Calais Sedan	8VX	19	8X19

***NOTE:** Model group and style numbers may have three numbers following. These refer to option packs.

ENGINE DESIGNATION ENGINE IDENTIFICATION CODE	Export 1.9 L4 VN	Export 2.85 L6 VD	3.3 L6 EST VL	3.3 L6 EFI VK	5.0 V8 VA-VB-VC
Number of Cylinders	4	6	6	6	8
Bore Diameter — mm	88.9	88.9	92.1	92.1	101.6
Stroke -– mm	76.2	76.2	82.5	82.5	76.7
Piston Displacement — Cu Cm	1892	2838	3298	3298	4979
Compression Ratio: 1 (Mean)	8.7	9.0	8.8	8.8	8.8
Taxable Horsepower (RAC or SAE)	19.6	29.4	31.5	31.5	51.2
Engine Power (DIN) kw @ rpm	54 @ 4400	73 @ 4400	86 @ 4200	109 @ 4400	111 @ 3600
Torque (DIN) Nm @ rpm	138 @ 2800	187 @ 2800	232 @ 2400	266 @ 3200	319 @ 2400
Octane Requirement (Research Method)	97	97	97	97	97
Cylinder Numbering (Front to Rear)	1234	123456	123456	123456	RH Bank 1357 LH Bank 2468
Firing Order	1342	153624	153624	153624	12784563
Valve Clearance	non-adjustable	non-adjustable	non-adjustable	non-adjustable	non-adjustable
IGNITION SYSTEM Contact Breaker Point Gap Ignition Timing	0.46 mm (.018 in) 10° B.T.D.C. Below 850 rpm	Breakerless Ignition 6° B.T.D.C. Below 850 rpm	Electronic Ignition 6° B.T.D.C. Below 900 rpm (Non-adjustable)	Breakerless Ignition 12° B.T.D.C. Below 1200 rpm	Breakerless Ignition 6° B.T.D.C. Below 850 rpm
Spark Plugs Type	43LT	43LTX	C42CLTSX	C42CLTSX	44TX
Gap — mm	0.95-1.05 mm	1.4-1.5 mm	1.4-1.5 mm	1.4-1.5 mm	1.4-1.5 mm
Idle Mixture Settings	Idle mixture and basic throttle settings have been preset and sealed. Removal of mixture screw caps and alterations to other than specified idle CO settings may violate state laws.				

Automatic Transmission — 'Trimatic'	Gear Ratios 1st	2nd	3rd	Rev
	2.31	1.46	1.00	1.85

Manual Transmission	1st	2nd	Gear Ratios 3rd	4th	5th	Rev
4 Speed — M21	2.54	1.83	1.38	1.00	—	2.54
4 Speed — MC6	3.50	2.02	1.41	1.00	—	3.57
5 Speed — M76	3.24	1.96	1.26	1.00	0.79	3.37

Rear Axle Ratios	Code:	G70	GU4	GU5	GV4	GU8
	Ratio:	2.60	3.08	3.23	3.36	3.90

LUBRICANT AND FLUID SPECIFICATIONS

ITEM	FLUID/LUBRICANT SPECIFICATION
Engine Oil	All except* — SE multigrade (meeting GM Spec. HN1455) *EFI engine in extreme operating conditions — SF multigrade (meeting GM Spec. HN1818)
Engine Coolant	(A) Corrosion Protection: Mixture of water and corrosion inhibitor meeting GM Spec. HN1109 (GM Part No. M39060) (B) Anti-Freeze and Corrosion Protection: Mixture of water and good quality ethylene glycol base anti-freeze conforming to GM Spec. 1899M
Manual Transmission 4 Speed	Multigrade meeting GM Spec. HN1046 SAE 80W/90
Manual Transmission 5 Speed	Multigrade meeting GM Spec. HN1855 SAE 80W
Automatic Transmission	DEXRON II* automatic transmission fluid only. (GM Part No. 9985286) *DEXRON II is a registered trademark of General Motors.
Power Steering System	DEXRON II* automatic transmission fluid (see above).
Manual Steering System	For Service replacement only use Heavy Duty gear oil SAE 85W/140.
Standard Rear Axle except GU5	Use Multipurpose Hypoid Gear Oil meeting GM Spec. HN1386 or HN1881 SAE 80W/90.
Rear Axle GU5	Use oil to GM Spec. HN1561 only. HN1967
Limited-Slip Differential	Use oil to GM Spec. HN1561 only. HN1967

ITEM	FLUID/LUBRICANT SPECIFICATION
Door Lock Cylinder Instrument Panel Compartment Lock Cylinder Rear Compartment Lid Lock Cylinder Tail Gate Lock Cylinder Fuel Cap Lock Cylinder	Powdered Graphite* (Apply through key aperture)
Engine Hood Catch and Lock Rear Compartment Hinges Engine Hood and Door Hinges Tailgate Hinges	Non-Staining Grease or Zinc Oxide Grease. (Use sparingly on parts likely to be contacted by clothing.)
Door Lock Fork Door Lock Striker Bolt	Solidoil (GM Part No. M33028) (Use sparingly on working surfaces.)
Brake Master Cylinder	Heavy Duty Brake Fluid meeting GM Spec. HN1796
Front Suspension and Steering Ball Joints	E.P. Type Lithium grease.
Front Wheel Bearings	Grease meeting GM Spec. HN1227.
Control Systems: Brake & Clutch Pedal Pivot, Clutch Linkage, Transmission Control Linkage, Accelerator Pivots Parking Brake System, Pivot and Guides	Grease meeting GM Spec. HN1225 (LG-2)
Speedo Cable	Grease meeting GM Spec. HN1421

FLUID CAPACITIES

ENGINE OIL	
	Litres
4 Cylinder — Service Refill	(b) 3.6
Add for Filter	(b) .3
6 Cylinder — Service Refill	(b) 3.7
Add for Filter	(b) .3
8 Cylinder — Service Refill	(b) 4.3
Add for Filter	(b) .3
MANUAL TRANSMISSION	
4 Speed — M21	1.9
4 Speed — MC6	1.6
5 Speed — M76	2.75
AUTOMATIC TRANSMISSION	
Service Refill — Approximate	(b) 2.3
Dry — 6 Cyl.	(a) (b) 6.1
— 8 Cyl.	(a) (b) 8.7
REAR AXLE	
All Models	(a) 1.4
BRAKE HYDRAULIC SYSTEM	(b) .62
COOLING SYSTEM	
4 Cylinder —	Approx. 8.5
6 Cylinder —	Approx. 8.5
8 Cylinder —	Approx. 12.0
Pressure Rating of Radiator Cap	103 kPa
FUEL TANK	
Sedan	63 litres
Wagon	68 litres

(a) — Only at Overhaul.
(b) — Use oil level for Final Check.

APPROXIMATE VEHICLE MASS

Refer to Vehicle Mass Chart in section 2 of this handbook.

APPROXIMATE VEHICLE DIMENSIONS (in millimetres)

ITEM			6 & 8 CYLINDER					4 CYLINDER (Export)			
			SEDAN			S/WAGON		SEDAN		S/WAGON	
			SL	Berlina	Calais	SL	Berlina	SL	Berlina	SL	Berlina
LENGTH			4714	4714	4714	4717	4717	4714	4714	4717	4717
WIDTH			1722	1722	1736	1722	1722	1722	1722	1722	1722
HEIGHT			1378	1378	1360	1401	1400	1367	1364	1392	1388
WHEELBASE			2668	2668	2668	2668	2668	2668	2668	2668	2668
TRACK STEEL 13" WHEELS	FRONT		NOT APPLICABLE					1480	1480	1480	1480
	REAR DRUM			"	"			1445	1445	1469	1469
	REAR DISC BRAKES			"	"			NOT APPLICABLE			
TRACK STEEL 14" WHEELS	FRONT		1451	1451	1451	1451	1451		"	"	
	REAR DRUM		1416	1416	1422	1440	1440		"	"	
	REAR DISC BRAKES		1424	1424	1424	1447	1447		"	"	
TRACK ALLOY 15" WHEELS	FRONT		1449	1449	1449	N/A	N/A		"	"	
	REAR DRUM		1414	1414	N/A	N/A	N/A		"	"	
	REAR DISC BRAKES		1422	1422	1422	N/A	N/A		"	"	
TURNING CIRCLE	CURB to CURB (Metres)	MANUAL	10.2	10.2	N/A	10.2	10.2	10.2	10.2	10.2	10.2
		POWER	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7	10.7
	WALL to WALL (Metres)	MANUAL	11.0	11.0	N/A	11.0	11.0	11.0	11.0	11.0	11.0
		POWER	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4	11.4
MINIMUM RUNNING GROUND CLEARANCE			144	143	134	141	140	128	127	124	123

N/A = Not Applicable

WHEEL NUT TORQUES

Recommended Wheel Nut Torque is 100-108 Nm (75-80 ft. lbs.).

TYRE SPECIFICATIONS TABLE

(**NOTE:** Always refer to the tyre placard in the glove box for specifications for **your** vehicle.)

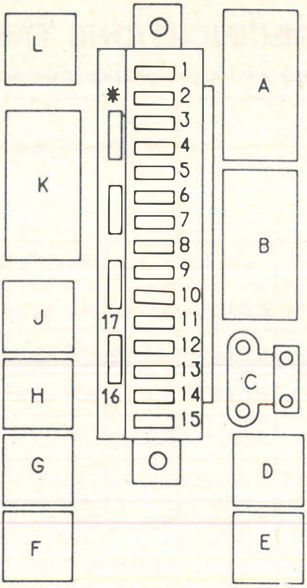
		Maximum Load Rating		Recomm. Cold Inflation Pressure kPa (psi)			
				Up to 3 Passengers		Up to Max. Load	
Tyre Size	Wheels	Listed	Others Acceptable	Front	Rear	Front	Rear
P185/75SR14	6.0JJx14	585 kg	585 kg or greater	200 (29)	200 (29)	240 (35)	240 (35)
P185/75HR14	6.0JJx14	585 kg	585 kg or greater	200 (29)	200 (29)	240 (35)	240 (35)
CR70H14	6.0JJx14	600 kg	600 kg or greater	200 (29)	200 (29)	220 (32)	220 (32)
195/70HR14	6.0JJx14	600 kg	600 kg or greater	200 (29)	200 (29)	240 (35)	240 (35)
P205/60HR15	6.0JJx15	590 kg	590 kg or greater	200 (29)	200 (29)	220 (32)	220 (32)
BR78S13	5.5JJx13	558 kg	558 kg or greater	200 (29)	200 (29)	250 (36)	250 (36)
P175/75SR14	5.5JJx14	530 kg	530 kg or greater	200 (29)	200 (29)	240 (35)	240 (35)
ER70H14	6.0JJx14	676 kg	676 kg or greater	240 (35)	240 (35)	280 (40)	280 (40)
205/70HR14	6.0JJx14	650 kg	650 kg or greater	240 (35)	240 (35)	280 (40)	280 (40)

REPLACEMENT BULB SPECIFICATIONS

Bulb	GMH Part Number	Power Rating
Headlamps High/Low Beam	11071361	60/55 Watt
Parking (Front)	11051209	4 Watt
Turn Signal (Front)	11062779	21 Watt
Turn Signal (Rear)	9417866	21 Watt
Back-up Lamp	11062779	21 Watt
Stop and Tail Lamp	11062789	21/5 Watt
Number Plate Lamp (Sedan)	SP1467	6 Watt
Number Plate Lamp (Wagon)	SP1903	3 Watt
Engine Compartment Lamp	11030669	10 Watt
Rear Compartment Lamp	11030669	10 Watt
Dome (Courtesy) Lamp	9414045	10 Watt
Front Seat Reading Lamp	455136	12 Watt
Rear Seat Reading Lamp	11030669	10 Watt
Glove Compartment	11015639	5 Watt
For specifications of all instrument panel illumination and warning lights see your GMH Dealer.		

FUSES, RELAYS AND ELECTRONIC CONTROL MODULES

	FUSE	
1	HEADLAMP LOW BEAM	15A
2	HEADLAMP HIGH BEAM	15A
3	PARKING LPS INSTRS ILLUM	7.5A
4	FUEL PUMP	E.F.I. 7.5A V8 5A
5	AIR COND BLOWER	25A
6	HORNS, STOP LPS.	15A
7	HTD. RR. WDO.	15A
8	HAZ WARN LPS. AIR COND AUX FAN	15A
9	CLOCK, TRIP CMPTR., INTERIOR ILLUM, RR. COMP'T. LAMP & LOCK	15A
10	IGN. SYSTEM	15A
11	RR WDO WPR/WASH	15A
12	INSTRS. TRIP CMPTR.	15A
13	WPR/WASH, TURN SIGNAL, CIG LTR.	15A
14	RADIO & PWR ANT. TAPE & PWR ANT.	3A 7.5A
15	HTR BLOWER	15A
✳	SPARE FUSE	



A	HTD RR WDO MOD
B	RR WDO WPR/WASH MOD
C	DR LK & PWR WDO CIRC BRKR
D	DR LK RELAY
E	DR LK RELAY
F	HORN RELAY
G	PWR WDO RELAY
H	AIR COND AUX FAN RELAY
J	AIR COND BLOWER RELAY
K	AIR COND CONTROL MOD
L	FUEL INJECT MOD

EMISSION CONTROL SYSTEMS

OWNER RESPONSIBILITY

Your vehicle is fitted with emission control systems which have been designed to meet the requirements of Australian Design Rules and State Regulations.

To ensure that these components achieve their purpose of controlling the emission of pollutants to the atmosphere, the engine or exhaust system of your vehicle must not be modified in any way. Any departure from the manufacturer's design specifications may increase the emissions or otherwise defeat the intent of the regulations.

IMPORTANT: ANY PERSON WHO REMOVES, MODIFIES OR OTHERWISE RENDERS INEFFECTIVE ANY EMISSION CONTROL COMPONENTS FITTED TO A VEHICLE WILL BE CONTRAVENING THE RELEVANT REGULATIONS AND BE GUILTY OF AN OFFENCE UNDER THE REGULATIONS. ANY PERSON WHO OWNS AND/OR OPERATES SUCH A VEHICLE COULD ALSO BE GUILTY OF AN OFFENCE UNDER THE REGULATIONS.

MAINTENANCE REQUIREMENTS

To ensure continuing compliance with the regulations it will be necessary for you to maintain your vehicle's emission control systems in accordance with the instructions given in the GMH Maintenance Plan (refer Section 6B) and the relevant Service Manuals.

It is recommended that the necessary servicing be performed by an authorised GMH Dealer who has the specialised servicing equipment and trained personnel available to ensure that the adjustments and services specified are carried out.

SERVICE REPLACEMENT PARTS

To ensure that your vehicle complies with the regulations it is imperative that any replacement parts used for maintenance services or for the repair of the emission control systems be new GM parts. Use of replacement parts other than genuine GM parts may impair the effectiveness of such systems.

APPLICATION AND DESCRIPTION OF SYSTEMS

The following descriptions are intended to give the owner a general description of the various emission control systems fitted to the vehicle. For detailed information enabling correct servicing and repair procedures refer to the appropriate service manual.

The following chart sets out the Emission Control Systems applicable to the engines used in VK series.

The purpose of these systems is to reduce the amount of hydrocarbons (HC), carbon monoxide (CO) and oxides of nitrogen (NOx) that are emitted from the engine and fuel system into the atmosphere.

Emission Control System	**L6 3.3 EST**	**L6 3.3 EFI**	**5.0 L**
Positive Crankcase Ventilation	X	X	X
Evaporative Emission Control	X	X	X
Early Fuel Evaporation	X	N/A	X
Vacuum Advance Control	N/A	X	X
Electronic Spark Timing	X	N/A	N/A
Air Preheat	X	N/A	X
Air Injection	X	N/A	N/A
Exhaust Gas Recirculation	X	X	X
Throttle Nudger	X Manual Only	N/A	N/A

N/A — Not Applicable

Positive Crankcase Ventilation (P.C.V.)

Positive Crankcase Ventilation is the system whereby engine blow-by gases are prevented from escaping into the atmosphere by recycling them through the engine.

Fresh air is drawn from the air cleaner cover into the crankcase where it mixes with the blow-by gases. The gas mixture is then drawn from the crankcase through the rocker cover, through the Positive Crankcase Ventilation Valve and into the inlet manifold. The hydrocarbons in the blow-by gases are then burnt in the engine combustion process.

Evaporative Emission Control (EEC) System

The purpose of the EEC system is to prevent the escape of fuel vapours (HC) from the vehicle's fuel system.

The heart of this system is the canister in the engine compartment, which contains activated charcoal granules. When the engine is not running, fuel vapours from the fuel tank are prevented from entering the atmosphere by the charcoal in the canister where they are adsorbed.

The vacuum purge line connects the canister to the inlet manifold via the carburettor or EFI throttle body. When the engine is running the vacuum draws air through the canister, and the adsorbed fuel vapour is drawn from the charcoal, forming a mixture with the air which is burnt in the engine combustion process. Vapours formed while the engine is running are drawn straight into the inlet manifold.

The fuel filler cap is fitted with a relief valve to prevent excessive vacuum or pressure in the fuel tank should the vapour line to the canister become blocked.

Early Fuel Evaporation (EFE) System

The EFE system is used to provide a source of rapid heat to the engine induction system during cold driveaway. Rapid heating is desirable because it provides for quick fuel evaporation and more uniform fuel distribution to aid cold driveability. It also reduces the length of time carburettor choking is required thus reducing exhaust HC and CO levels.

The system uses a valve which allows the exhaust gas to flow under the intake manifold during cold engine operation. The valve is vacuum operated and is controlled by a thermal vacuum switch (TVS) which passes vacuum to the valve when the coolant temperature is below the calibration value.

Vacuum Advance Control (VAC)

The basis of this system is the control of the vacuum available to the distributor's vacuum advance mechanism dependant on operating conditions.

Ported vacuum to the distributor is controlled through Thermal Vacuum Switches which sense engine and ambient temperatures. If the engine begins to overheat such as when operating in extreme conditions, one of these switches allows full manifold vacuum to the distributor thus enabling the engine to run cooler.

Electronic Spark Timing (EST)

The EST system uses a microprocessor based Electronic Control Unit (ECU) to compute the optimum ignition timing based on several engine parameters. The Electronic Control Unit receives input from:

— A manifold vacuum sensor
— Crankshaft position sensor
— Engine coolant temperature sensor
— Throttle position switch
— Air conditioning clutch solenoid
— Diagnostic mode switch
— Ignition switch

From these inputs and by reference to stored data, the ECU controls primary coil current to achieve the required dwell and spark timing for reduced exhaust emissions, whilst providing optimised fuel consumption and performance.

Air Preheat

This system provides pre-heated air to the carburettor during part throttle operation, until the engine compartment air temperature reaches a pre-set level.

Pre-heated air is supplied from the exhaust manifold heat stove via the hot air duct to the underside of the air cleaner assembly snorkel. A thermal vacuum valve controls the operation of a vacuum motor which operates the control damper assembly, and this regulates the amount of air supplied from the exhaust manifold stove.

The installation of this system ensures better engine response during the engine warm-up period also, leaner fuel setting can be used, which assists in reducing engine emissions and fuel consumption.

During full throttle operation cool air only is drawn into the engine for maximum power.

Air Injection System

An air injection reaction system is used to provide additional oxygen to continue the combustion process after the exhaust gases leave the combustion chamber. This has the effect of reducing hydrocarbon and carbon monoxide emissions.

An engine driven pump is used to provide pressurised air which is injected into the exhaust ports of the cylinder head.

The air pump operates at all times and will bypass air only for a short duration of time during deceleration to prevent backfiring.

A diverter valve performs the bypass function and the back flow of exhaust gas is prevented by means of a check valve.

Exhaust Gas Recirculation (EGR)

This system introduces controlled quantities of exhaust gas into the inlet manifold resulting in lower peak combustion temperatures in the combustion process which, in turn, reduces the formation of oxides of nitrogen.

The EGR valve is operated by ported vacuum from the carburettor (or EFI throttle body). When the engine is cold, a Thermal Vacuum Switch (TVS) denies vacuum to the EGR valve. As the engine warms, the TVS opens and ported vacuum controls the EGR valve.

EST engines are also fitted with a Remote Backpressure Transducer which modulates the vacuum signal from the carburettor to the EGR valve according to engine load by monitoring exhaust back pressure.

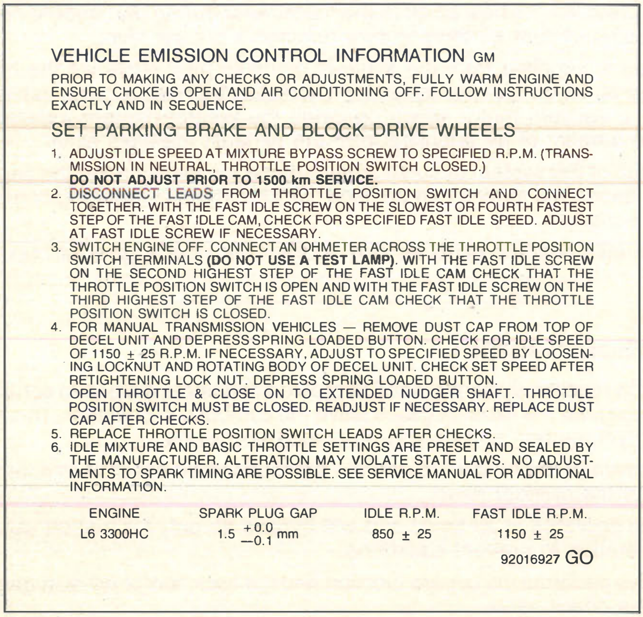
Throttle Nudger

During deceleration, hydrocarbon emissions are high because insufficient mixture is drawn into the combustion chamber for complete combustion. To reduce these overrun hydrocarbons, it is necessary to have the throttle partly opened so that enough mixture is drawn into the combustion chamber to maintain combustion.

This is achieved by use of a throttle nudger which is a vacuum operated push device acting upon the carburettor throttle lever to hold the throttle open on overrun.

VEHICLE EMISSION CONTROL INFORMATION LABEL

This label is located in the engine compartment on the left hand strut tower and provides all relevant specifications required to correctly tune the engine of your vehicle.



VEHICLE EMISSION CONTROL INFORMATION GM

PRIOR TO MAKING ANY CHECKS OR ADJUSTMENTS, FULLY WARM ENGINE AND ENSURE CHOKE IS OPEN AND AIR CONDITIONING OFF. FOLLOW INSTRUCTIONS EXACTLY AND IN SEQUENCE.

SET PARKING BRAKE AND BLOCK DRIVE WHEELS

1. ADJUST IDLE SPEED AT MIXTURE BYPASS SCREW TO SPECIFIED R.P.M. (TRANSMISSION IN NEUTRAL, THROTTLE POSITION SWITCH CLOSED.) **DO NOT ADJUST PRIOR TO 1500 km SERVICE.**
2. DISCONNECT LEADS FROM THROTTLE POSITION SWITCH AND CONNECT TOGETHER. WITH THE FAST IDLE SCREW ON THE SLOWEST OR FOURTH FASTEST STEP OF THE FAST IDLE CAM, CHECK FOR SPECIFIED FAST IDLE SPEED. ADJUST AT FAST IDLE SCREW IF NECESSARY.
3. SWITCH ENGINE OFF. CONNECT AN OHMETER ACROSS THE THROTTLE POSITION SWITCH TERMINALS **(DO NOT USE A TEST LAMP)**. WITH THE FAST IDLE SCREW ON THE SECOND HIGHEST STEP OF THE FAST IDLE CAM CHECK THAT THE THROTTLE POSITION SWITCH IS OPEN AND WITH THE FAST IDLE SCREW ON THE THIRD HIGHEST STEP OF THE FAST IDLE CAM CHECK THAT THE THROTTLE POSITION SWITCH IS CLOSED.
4. FOR MANUAL TRANSMISSION VEHICLES — REMOVE DUST CAP FROM TOP OF DECEL UNIT AND DEPRESS SPRING LOADED BUTTON. CHECK FOR IDLE SPEED OF 1150 ± 25 R.P.M. IF NECESSARY, ADJUST TO SPECIFIED SPEED BY LOOSENING LOCKNUT AND ROTATING BODY OF DECEL UNIT. CHECK SET SPEED AFTER RETIGHTENING LOCK NUT. DEPRESS SPRING LOADED BUTTON.
   OPEN THROTTLE & CLOSE ON TO EXTENDED NUDGER SHAFT. THROTTLE POSITION SWITCH MUST BE CLOSED. READJUST IF NECESSARY. REPLACE DUST CAP AFTER CHECKS.
5. REPLACE THROTTLE POSITION SWITCH LEADS AFTER CHECKS.
6. IDLE MIXTURE AND BASIC THROTTLE SETTINGS ARE PRESET AND SEALED BY THE MANUFACTURER. ALTERATION MAY VIOLATE STATE LAWS. NO ADJUSTMENTS TO SPARK TIMING ARE POSSIBLE. SEE SERVICE MANUAL FOR ADDITIONAL INFORMATION.

ENGINE	SPARK PLUG GAP	IDLE R.P.M.	FAST IDLE R.P.M.
L6 3300HC	1.5 $^{+0.0}_{-0.1}$ mm	850 ± 25	1150 ± 25

92016927 GO

VEHICLE EMISSION CONTROL INFORMATION GM

MAKE IDLE SPEED AND TIMING ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE PREFERABLY ACHIEVED BY DRIVING.

SET PARKING BRAKE AND BLOCK DRIVE WHEELS

1. ENSURE TRANSMISSION IS IN PARK AND AIR CONDITIONING IS OFF.
2. DISCONNECT AND PLUG VACUUM HOSE FROM DISTRIBUTOR.
3. SET TIMING TO SPECIFIED VALUE BELOW 1100 R.P.M.
4. RECONNECT HOSE TO DISTRIBUTOR.
5. CHECK IDLE SPEED IS IN THE RANGE 800 TO 900 R.P.M. FOR RUN IN ENGINES. NEW ENGINES SHOULD NOT BE ADJUSTED DURING THE FIRST 1500 km UNLESS OUTSIDE THE RANGE 700 TO 900 R.P.M.
6. RESET IDLE SPEED BY ADJUSTING THE SCREW AND LOCK NUT ON THE AIR BY-PASS PASSAGE AT THE TOP OF THE THROTTLE BODY.
7. RELOCK NUT AFTER ADJUSTMENT.

NOTE: THE SEALED THROTTLE LEVER STOP MUST NOT BE ADJUSTED.
IDLE MIXTURE IS PRESET BY THE MANUFACTURER. DO NOT REMOVE CAPS. REMOVAL OF MIXTURE SCREW CAPS AND ALTERATIONS TO OTHER THAN SPECIFIED IDLE CO SETTINGS MAY VIOLATE STATE LAWS. REFER SERVICE MANUAL FOR ADDITIONAL INFORMATION.

ENGINE	SPARK PLUG GAP	IDLE R.P.M.	IGN. TIMING
L6 3300 EFI	$1.5^{+0.0}_{-0.1}$ mm	850 ± 50	12° BDTC

92017306 GR

VEHICLE EMISSION CONTROL INFORMATION GM

MAKE IDLE SPEED AND TIMING ADJUSTMENTS WITH ENGINE AT NORMAL OPERATING TEMPERATURE, TRANSMISSION IN NEUTRAL, CHOKE OPEN, AIR CONDITIONING OFF, AIR CLEANER INSTALLED AND DISTRIBUTOR VACUUM LINE DISCONNECTED AND PLUGGED. RECONNECT DISTRIBUTOR VACUUM LINE WHEN ADJUSTMENTS ARE COMPLETED.

SET PARKING BRAKE AND BLOCK DRIVE WHEELS

1. SET TIMING TO SPECIFIED VALUE WITH IDLE STOP SOLENOID WIRE DISCONNECTED TO ENSURE IDLE SPEED IS BELOW 800 R.P.M. RE-CONNECT SOLENOID WIRE AFTER ADJUSTING TIMING, THEN OPEN THROTTLE SLIGHTLY TO SET SOLENOID.
2. IDLE SPEED ON NEW ENGINES (UNDER 1500 km) MAY VARY IN THE RANGE 700-850 R.P.M. AND SHOULD NOT BE ADJUSTED UNTIL VEHICLE HAS REACHED 1500 km. IF THE IDLE SPEED IS HIGHER THAN 850 R.P.M. IT SHOULD BE ADJUSTED DOWN TO 850 R.P.M. BY TURNING IDLE STOP SOLENOID SHAFT. AFTER 1500 km IDLE SPEED SHOULD BE ADJUSTED TO 850 ± 25 R.P.M.
3. WITH THE FAST IDLE SCREW ON THE SECOND HIGHEST STEP OF THE CHOKE CAM, ADJUST TO SPECIFIED FAST IDLE SPEED.
4. IDLE MIXTURE PRESET AT FACTORY, DO NOT REMOVE CAPS. REMOVAL OF MIXTURE SCREW CAPS AND ALTERING TO OTHER THAN SPECIFIED IDLE MIXTURE SETTING MAY VIOLATE STATE LAWS. SEE SERVICE MANUAL FOR ADDITIONAL INFORMATION.

ENGINE	IDLE R.P.M.	FAST IDLE R.P.M.	IGN. TIMING	PLUG GAP mm
V8 5.0L	SEE NOTE 2 ABOVE	1500 ± 50	6° BTDC	$1.5^{+0.0}_{-0.1}$

92021085 GI

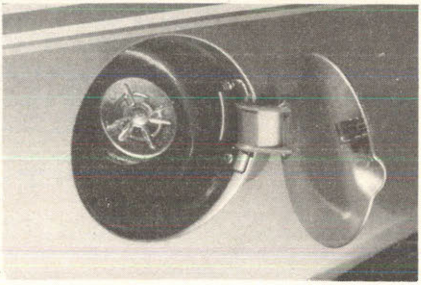
SERVICE STATION INFORMATION, INDEX, ACCIDENT PROCEDURES

Fuel Cap

The fuel cap is located behind a hinged door on the driver's side just behind the rear wheel arch.

To remove the fuel cap turn it anti-clockwise.

If your vehicle has a locking fuel cap then use the master key to unlock it before turning cap in anti-clockwise direction.



Fuel Requirements

This vehicle is designed to operate on a good quality clean fuel of 97 Octane Rating (Super).

The use of a fuel which is too low in octane rating (anti-knock property) will result in "Detonation" (a metallic rapping noise generated during the combustion process). If "Detonation" persists, consult an authorised GMH Dealer. Continued operation of an engine which exhibits symptoms of heavy "Detonation" may result in damage for which General Motors-Holden's Limited is not responsible.

CAUTION: Petrol is extremely flammable and highly explosive under certain conditions. Always stop the engine and do not smoke or allow open flames or sparks near the vehicle when refuelling. If petrol fumes are noticed while driving, the cause should be determined and corrected without delay.

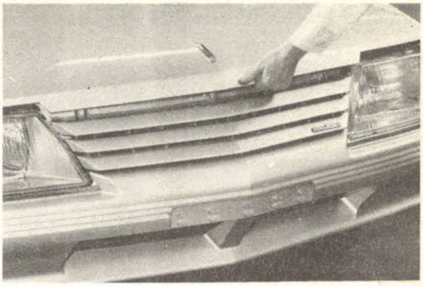
Filling the Fuel Tank

Overfilling of the fuel tank can affect the evaporative Emission Control System.

To avoid this, the following recommendations are made:

1. Fuel tanks should always be filled at the intermediate or fast fill rate. After initial shut-off (or vent blow back) no further fuel should be added. This retains the tank's ability to accommodate fuel expansion.
2. It is permissible to "trickle fill" fuel tanks where vehicles are to be driven for a distance of at least 50 km shortly after the tank is filled.

Engine Hood Lock and Catch



To open the engine hood, pull hood lock release located beneath the instrument panel, to the right of the steering column. This allows the hood to release but is prevented from opening by the safety catch. To open completely, reach in between the grille and hood to lift safety catch upward. Hold in this position, raise hood and support by inserting support rod into the provided slot. For closing, return support rod to its resting position and lower hood gradually to be finally dropped by its own weight.

Always check to make certain hood is properly secured. If necessary, check that release handle below the instrument panel is pushed-in to its normal position.

Engine Oil Dipstick

Check the oil level as the last operation when stopped for fuel. Maintain oil level between ADD and FULL marks on the dipstick. (For important information on engine oil and viscosity grades, refer to Section 6A of this handbook.)

Tyre Pressures

Check tyre pressures at least weekly (including the spare). Keep them inflated to the pressures shown on the Tyre Placard in the glove box.

IMPORTANT: ALLOWANCE MUST BE MADE FOR INFLATION PRESSURES IF CHECKING TYRES 'HOT'. REFER TO SECTION 6A FOR DETAILS.

Engine Coolant Level

Check the fluid level in the coolant recovery reservoir at regular intervals, such as during a fuel stop.

Check the fluid level in the radiator at least weekly, preferably when the engine is cold.

(For details on filling procedures and recommended coolant refer to "Engine Cooling System" in Section 6A of this handbook.)

Battery

Check electrolyte fluid level monthly. Top up as required with distilled water to bring level to approximately 1 cm above plates.

NOTE: If your vehicle is fitted with a 'Maintenance Free' battery it has no filler cap and never needs to be topped up. (Refer to Section 6A for additional information.)

Windshield Washer/Tailgate Washer (Wagon)

Check the washer reservoir fluid levels regularly. Use a washer fluid additive such as Optikleen.

Brake Fluid Reservoir

Check the brake fluid level in the master cylinder reservoir regularly such as during a fuel stop. The fluid level is visible through the ''see through'' reservoir and should be maintained between the MIN and MAX marks. Use only recommended fluid. (Refer to ''Brake Master Cylinder'' in Section 6A for more details.)

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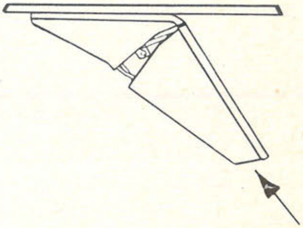
SUPPLEMENTARY INFORMATION

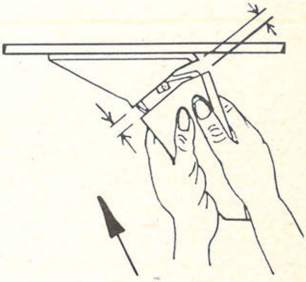
OUTSIDE REAR-VISION MIRRORS — 'KNOCKAWAY' FEATURE

The outside mirror(s) fitted to your VK Commodore may be of the type which is released from its support if it receives a heavy impact from the front or the rear. If this happens the mirror will need to be reassembled to its support using either of the following methods:

Method 1.
Position mirror as shown and apply blows to the end of the mirror using a clenched fist or the palm of your hand until the mirror snaps into position. **To protect the hand it may be necessary to wear a padded glove.** Do not use a heavy rubber mallet or similar tool as this may crack the plastic casing.



Method 2.
Grasp the mirror as shown and, using your bodyweight, push the mirror until it snaps into position. This operation is most successful when the initial gap is parallel and the mirror is pushed with an impact type push (i.e. not a steady push).



NOTE: If you experience difficulty in reassembling the mirror or, if you would prefer to have this operation carried out by someone else, then drive to your nearest GMH Dealer who will arrange to have it done while you wait.

"ADD ON" EQUIPMENT — FRONT OF VEHICLE

Owners intending to fit additional equipment to the front of the vehicle, such as 'bull bars' etc. should first check with their GMH dealer.

Depending on the mass of the equipment, it may be necessary to fit heavier duty springs and struts to help avoid potential damage to the front underside of the vehicle when driving in rough road conditions.

NOTE: Vehicles that have been fitted with the optional Outback Pack will have these heavy duty front suspension components fitted as part of the package.

ACCIDENTS

All motorists are advised to learn what to do at the scene of an accident, particularly where persons are injured. Injured people can choke to death if their air passages are not cleared. They can bleed to death unless the bleeding is stopped. They may require mouth-to-mouth resuscitation, may have to be moved, even though badly injured. It is important that you understand how to avoid further damaging an injured neck or back or other broken limbs.

The following notes may help.

- **Part 1. Accident — being involved.**
- **Part 2. Accident — being a witness.**
- **Part 3. Medical assistance.**

Part 1. Accident — being involved

If you are involved in an accident you are advised to do as follows:

Stop immediately.

Remember that time is vital. Remain calm and alert. Think quickly and clearly.

Give all possible assistance to all injured persons. (See Part 3 Medical Assistance).

Send for police and ambulance if anyone has been injured. Send information as accurately as possible. Give the exact location, the number of injured people and a brief report on the overall situation.

Perhaps take charge of the situation.

Warn all other traffic approaching the scene. Turn off ignition switches. Stop any smoking near spilt petrol. In darkness, try and light up the area to warn others.

Clear the road of accident debris.

Exchange your name, address, vehicle registration number and the vehicle owner's name and address with the other parties involved in the accident.

If damage to property only has occurred, report the facts to the owner of the damaged property or to his or her representative; to any police present at the scene or to the nearest Police Station.

Try and note all important facts because such details may be important if needed later.

Part 2. Accident — being a witness

If you witness a road accident or it becomes your task to stop and help at the scene of an accident, do this:

Keep in mind that an observant witness can prove most helpful. Some day you yourself might be very glad of help from a witness.

DO NOT stop at the scene of an accident *just to be a spectator.*

Where other people are already in attendance and giving assistance, **you should stop only if you can contribute assistance.**

Give what assistance you can to any injured persons. (See Part 3 Medical Assistance.)

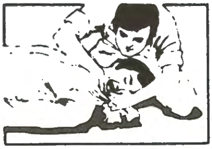
Follow most of the steps suggested in Part 1. Perhaps you may have to take charge of the accident situation.

Part 3. Medical assistance

Keep calm and think clearly.

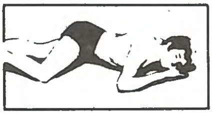
Your experience may not be much but do your best. Don't just stand by and let an injured person die.

- Look after the unconscious person first. Check for breathing. If no breathing, then check if air passages are clear, i.e. nose and mouth. Use your fingers to clear air passages if necessary. If the air way is clear then mouth-to-mouth resuscitation may be needed at once.



Unconscious people can choke.
Carefully turn to one side.
Tilt the head back slightly.
Wipe out the mouth with your finger to remove blood, vomit, broken teeth or dentures.

- You must be most careful in moving an injured person. Often it is best not to move at all but, in conditions of danger, that is not always possible. Serious and permanent damage can be done to an injured neck or back if not supported during movement. NEVER BEND A NECK OR BACK. KEEP THEM STRAIGHT. All injured limbs require support when an injured person has to be moved.
- Provided it is not dangerous to do so because of other injuries, an unconscious person will do best in the "coma position" illustrated here.



Lay the person on one side and — if will not aggravate any injuries — then: Bend the uppermost knee until the thigh is at right angle to body.
Bend the uppermost arm and elbow so that the hand lies near the face.
Gently pull the underneath arm so that it rests straight on the ground free of any body weight.

- Try to stop bleeding by applying direct pressure, using your hands, or by pressing torn flesh together. Use any clean cloth available. Fold cloths to make pads. If necessary, press one pad on top of another. Keep pressure around edges of a wound BUT NEVER USE A TOURNIQUET.

Shock may be treated by reassurance, relieving pain, controlling any bleeding and keeping the injured person warm *but not hot.* Best not to give any fluids and NEVER ALCOHOL.

- If the injured person is in danger and has to be moved, try and have three or four people help and concentrate on not bending the neck, spine and injured limbs. **Keeping the neck and spine straight is most important.**

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A HOLDEN PUBLICATION

Printed in Australia by The Dominion Press-Hedges & Bell, Maryborough 3465